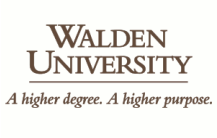



2017

# Program Evaluation of a Competency-Based Online Model in Higher Education

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College of Education

This is to certify that the doctoral study by

Karen DiGiacomo

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
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Abstract

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MEd, University of Massachusetts, 1996

BA, University of Northern Colorado, 1990

Doctoral Study Submitted in Partial Fulfillment

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## Abstract

In order to serve its nontraditional students, a university piloted a competency-based program as alternative method for its students to earn college credit. The purpose of this mixed-methods study was to conduct a summative program evaluation to determine if the program was successful in order to make decisions about program revision and expansion. The conceptual framework for the study was grounded in Knowles's adult learning theory and Bandura's social learning theory as they relate to adult learners being self-directed and self-motivated to complete their educational goals. The pilot program involved 60 students taking 12 different courses over 3 semesters. Quantitative research questions focused on student completion and pass rates, pacing of assignment submissions, and achievement of course competencies. Qualitative research questions explored perceptions of students, faculty, and advisors regarding the program through individual interviews and student surveys. Transcribed interviews were analyzed and summarized using structural and pattern coding methodology. Quantitative findings show an 83% completion rate, 60% passing rate, 32% of students falling 2 weeks or more behind, and differences in competency achievement between pilot students and traditional students. Qualitative findings revealed 5 themes: good for some but not for all, student success factors are self-motivation and professional experience, attainment of competencies, student support by faculty, and peer-to-peer interaction. This study has potential to add to the growing research on competency-based education, which can ultimately affect social change by moving higher education to more innovative alternative delivery models that can better serve the needs of nontraditional students.

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# Dedication

This project study is dedicated to my two daughters and sources of inspirational love notes: Sophia and Kalliope.

Acknowledgments

I would like to thank my friends and family for their support and sticking by me through the years, my university colleagues for all of their advice and assistance, and my program chair for her patience and guidance. Most of all I would like to thank my Higher Power for daily grace and love.

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Section 1: The Problem

## Introduction

Colleges and universities have been challenged to innovate and adapt to meet the needs of a growing number of adult students who are seeking to complete a degree or gain credentials while balancing family and work responsibilities. These adults, usually referred to as *nontraditional students*, are seeking affordable, high- quality educational programs that can help them fulfill their professional goals. There has been a steady increase in the numbers of nontraditional students in higher education since the 1970s (Soares, 2013). To define, nontraditional students are typically over the age of 25 years old, working full or part time, and have family responsibilities (Baker, 2015). Also, nontraditional students do not fit into the traditional college student model of someone enrolling at a brick-and-mortar college campus having recently graduated from high school (Everhart & Bushway, 2014).

Soares (2013) stated that nontraditional students typically have some college credit and are often seeking higher education to secure a better position in their field or change careers. Currently students who fit into the nontraditional category outnumber traditional college students (Soares, 2013). These students have different needs than traditional students. They often need accessible instruction, integrated curricula that is both academic and occupational, and alternative pathways to attain a degree or credentials (Soares, 2013). The needs of nontraditional students are not always met under the conventional model of earning a degree by attending class in-person at a college campus because many are not able to attend according to the on-ground campus schedule

(Soares, 2013). A recent study found that nontraditional students face numerous challenges balancing multiple responsibilities and feel that they are not understood by their institutions (van Rhijn, Lero, Bridge, & Fritz, 2016). Because nontraditional students have a diverse set of needs, colleges and universities are looking to provide alternative and innovative methods of educating them. According to Soares higher education will ultimately be transformed by the needs of these nontraditional learners.

Competency-based education (CBE) is one approach that universities are considering as a way to meet the needs of nontraditional learners and the changing demographics of postsecondary students (Berrett, 2015; Nodine, 2016). Under a CBE model, learning is measured by the demonstration of competencies rather than by time spent in a classroom (Ordonez, 2014; Schejbal, 2015). To define, CBE refers to an educational model where progress is determined by whether students can demonstrate what they know and are able to do (Everhart, Sandeen, Seymour, & Yoshino, n.d.; Klein-Collins, 2013). CBE differs from traditional college education because in the traditional format, credit is earned based off of the federal definition of the credit hour, which uses time as the measurement to award credit. There is growing recognition that seat time is not the only way to measure how much college credit to award (Ordonez, 2014). Laitinen (2012) wrote that the credit hour currently serves as a proxy for the measurement of learning, even though time and learning are not the same. Laitinen noted that different students can spend the same amount of time in the classroom yet learn different things. Therefore, CBE has received a resurgence of attention by leaders in higher education who see it as a potential way to address growing concerns over the quality and cost of

education while offering a high-quality education that is both affordable and flexible (Klein-Collins, 2013; Lowry, 2014; Schejbal, 2012). Offering competency-based coursework is gaining momentum as higher education leaders look to better meet the needs of nontraditional learners while simultaneously lowering costs, thereby increasing the chances that students will be able to complete their degrees.

Another contributing factor for the development of CBE is employer need for a more college-educated workforce. CBE has been looked at as a solution for employers who need skilled and educated workers to meet the needs of a growing economy and to compete globally (Lumina Foundation, 2015; Nodine & Johnstone, 2015). Employers are requiring more than ever that employees have a postsecondary degree (Everhart & Bushway, 2014). Researchers have predicted that 70% of new jobs will require a college degree over the next 10 years (Ordonez, 2014). As a result of these concerns and issues, competency-based education models have expanded nationally, and federal and state agencies are now looking at CBE as an alternative to the traditional college credit model (Ordonez, 2014). According to Kelly and Columbus (2016), competency-based models are appealing because of their potential to enhance college affordability, boost college completion, and provide employers with information about the knowledge and skills that a graduate possesses. The potential for CBE models to address challenges in higher education are appealing to higher education decision makers who are seeking to meet the needs of a wide range of constituents.

## The Local Problem

Union State University (pseudonym) is one such institution whose leaders are seeking to meet the needs of its diverse students. Union State is a public, nonprofit university that offers online programs to mainly nontraditional students. These nontraditional students come in with a variety of educational and work experiences, and are attracted to taking courses in an online modality to meet their schedules and lifestyles. It is mainly a degree completion institution in that the majority of its students enroll as undergraduate students and come to the university with some college credit already completed. As a way to foster degree completion, Union State offers alternative forms of credit to its students to provide multiple pathways for them to earn credit and complete their programs of study. With the goal of providing multiple pathways for students to earn credit in mind, leaders at the university recently created and piloted a competency-based education program called competency-based assessment (CBA). Competency-based programs typically attract nontraditional students who are older and have prior educational and/or work experience (Baker 2015; Morrison, 2016; Ordonez, 2014). If students have prior learning, then the competency-based format allows them to avoid replication of course content; however, if they do not have prior learning, it allows them to progress through and get regular feedback (Sandeen, 2014). Leaders at Union State decided that a competency-based program could benefit its nontraditional students by offering them an alternative pathway to degree completion.

The CBA program was created in order to help meet students' needs and provide innovative alternative education opportunities for nontraditional students. The CBA

program was structured using the same eight-module online course format that is used in the university's online learning management system (LMS) which is used to provide the other online courses. In the CBA format, however, students completed the eight-module online course at their own pace and without an instructor facilitating the course. Students needed to successfully complete all of the assignments in the CBA (which were the same assignments that were in the traditional version of the online course) within the eight-week timeframe in order to receive credit.

Instead of having an instructor, the CBA was assigned a *faculty evaluator* whose main role was to assess the students' work but otherwise did not interact with the student unless the student emailed the faculty evaluator with a question about the assignment or grade. For example, the university offers an undergraduate online course called Principles of Management with the course code of MGT300. In the traditional online MGT300 course, there is an instructor facilitator who posts announcements, facilitates discussions, and evaluates student work. In the CBA version of MGT300 Principles of Management, which had the course code of MGT300A to differentiate it from the traditional course, the discussion prompts were changed to short answer assignments, and students had to complete those and all of the other assignments from the traditional online course within the eight-week timeframe.

Student could move at their own pace as long as all of the assignments were turned in at the end of the eight weeks. The assignments were used to measure whether students had attained the course competencies; if students passed the CBA, as determined by their final grades, then they would have attained the course competencies. For the

CBA pilot program there was a total of six different undergraduate courses and six different graduate courses that were offered in the competency-based format. They were offered in three phases with two undergraduate (300 or 400-level) and two graduate (500-level) courses offered in each phase. The courses were from a variety of different bachelor level and masters level programs, which was an intentional decision so that university leaders could see if performance varied by program.

University leaders were aware that the CBA format was not for everyone. It was meant for self-motivated, independent students who felt they did not need individualized guidance to complete courses. The potential benefits of the competency-based model were that students could have more options as to the type of coursework they could take to fulfill their degree requirements. Additionally, the CBA was intended to cost approximately one-third less in tuition than a traditional, instructor-facilitated online course. Therefore, the CBA format might be an attractive option to a subset of students who were self-directed, might already know some of the content through prior experience, and who would like to decrease the overall cost of acquiring their degree.

Leaders at Union State University needed to determine whether the CBA courses benefitted students and which types of students they benefitted. The problem addressed in this study is that university leaders did not have the necessary information they needed to make a decision about improvement and expansion of the program. The university ran a pilot of the program in a total of 12 courses with a total of 60 students. Table 1 provides information regarding the courses that were offered in the CBA format.

Table 1

*Courses That Were Offered in the CBA Format*

| Phase | Course Offered in CBA Format | Main Parent Program |
|---|---|---|
| 1 | MGT300 Principles of Management | B. S. in Business Management |
| | HCM310 Introduction to the U.S. Healthcare System | B. S. in Healthcare Administration and Management |
| | HCM502 Organizational Behavior and Human Resources in Healthcare | Master of Healthcare Administration |
| | ORG530 Business Ethics and Corporate Social Responsibility | M. S. in Organizational Leadership |
| 2 | ECN310 Microeconomic Principles | B. S. in Business Management |
| | HCM370 Quality and Risk Management in Healthcare | B. S. in Healthcare Administration and Management |
| | HCM520 Managing Performance for Results | Master of Healthcare Administration |
| | ORG555 Leading Diverse Teams | M. S. in Organizational Leadership |
| 3 | ITS315 Introduction to Networks | B. S. in Information Technology |
| | ACT410 Government and Nonprofit Accounting | B. S. in Accounting |
| | FIN570 Insurance and Risk Management | Master of Finance |
| | PJM525 Business Analyses | Master of Project Management |

By offering courses in the CBA format that were in a variety of different degree programs, university leaders were able to see not only whether students succeeded but

whether there were differences in performance between graduate and undergraduate students as well as whether different types of courses were better to offer in the CBA format. Piloting different types of students (graduate and undergraduate) in different degrees and subject areas (technical and theoretical) helped university leaders determine which types of students and programs the competency–based format was best suited for. To address the problem of this study, program leaders needed to be provided information in the following areas in order to make decisions about how to improve and potentially expand the program: completion and pass rates, pace of assignment submissions, demonstration of course competencies, and student perceptions of the CBA including their motivations for taking CBA, whether they felt supported, and their level of satisfaction with the CBA. For each of these areas, leaders were not only interested in seeing performance overall, but also would like to evaluate whether there are differences in the graduate and undergraduate students or among the different programs and areas of coursework.

Completion and pass rates were to be looked at because it is not in a student's best interest to enroll in and pay for a competency-based course if they do not finish or pass it. At Union State University, both undergraduate and graduate students are required to retake a course if they score a D or lower, so passing at a C or higher was considered acceptably passing for a CBA. Additionally, university leaders did not want to see a large number of withdrawals from a CBA since it would not be in the best interest of students to pay for a CBA and then not finish it.

One of the success factors of a self-paced course was whether students handed in assignments in a timely manner, so university leaders wanted to monitor the pace of assignment submissions. A CBA, like a traditional online course, was eight weeks in length and consisted of eight modules. Ideally a student in a CBA would complete at least one module per week so that they were not in position of having to hand in most of their assignments at the end of the CBA. Leaders at the university wanted to know if students followed the recommendation of completing one module per week, and if not, how far behind they fell. Specifically, they wanted to know if a majority of students in the CBA fell over two weeks behind in handing in coursework. Students in the traditional online course are allowed to hand in assignments up two weeks late for a 10% penalty. Because the CBA is self-paced, there was no late penalty, but all assignments were due by the last day of class, as with the traditional online course.

Because students would be earning college credit solely based on demonstration of competencies, university leaders were interested in knowing how well students achieved the course competencies in the CBA and how they compared to students in the regular online courses. Achievement of the course competencies (at Union State these are called the course outcomes) could be directly measured from the assignments in the course. At Union State, all online courses are designed around the course outcomes (which ultimately map to the overall program outcomes), and students are expected to demonstrate mastery of the course outcomes through their performance on the major course assignments.

The major course assignments consist of critical thinking assignments and one final portfolio project. There are typically five critical thinking assignments throughout the first seven modules and there is always one final portfolio project due at the end of the course in the eighth module. There are also shorter assignments that support the course outcomes such as discussion boards, which in the CBA became short answer assignments, and in undergraduate courses there are weekly mastery exercises (quizzes). The smaller assignments are building blocks for the major assignments, so for the purposes of competency achievement, it was only necessary to look at performance on the major assignments.

Instructional designers and faculty content experts worked collaboratively to map all course outcomes to the major course assignments during the design stage of each course to ensure that all course outcomes are assessed through the major assignments. See Appendix B for the assignment mapping for MGT300 which I provide as a sample. Additionally, as a quality assurance measure, in a traditional course, all mapping and coursework is reviewed by two additional faculty members and the program coordinator prior to finalization. When a student takes a traditional online course or a CBA, every major assignment is graded with a rubric which indicates the level of mastery the student achieved on the assignment and its mapped outcomes. The rubric is broken into four categories: meets expectations, approaches expectations, below expectations, and limited evidence. By looking at the raw scores that students earn (meaning the scores students earn based solely on the merit of their work and before any late penalties are incurred in the traditional online course), a determination can be made as to whether course

competencies have been met. In other words, a student earns points on assignments when they are evaluated with rubrics, and based on the points assigned it can be determined if the student met expectations, approached expectations, etc. A CBA utilized all of the same major assignments as the traditional online course, thus ensuring that the assessments were of high quality and had been vetted by faculty, an instructional designer, and the program coordinator.

The student perceptions of the CBA were explored, including the reasons why students chose to enroll in the CBA as well as their level of satisfaction with the experience. Knowing why students chose to enroll in the CBA was important to university leaders as they look to improve the target student population for the CBA program and who it is best suited for. The level of student satisfaction with the CBA was also important for leaders to know, and this includes whether they felt supported as well as what they liked and disliked about the CBA. Even though the program targeted students who were independent and self-motivated, leaders at the university still wanted students to feel supported while taking the CBA, and they were provided with access to the university library, tutoring services, and student advisors for support. However, the students did not interact with faculty unless they had a question about the assignments in the CBA or the instructor's feedback on the assignments, so university leaders wanted to know if students felt that was detrimental. Additionally, university leaders wanted to know what those in the most direct contact support students, in this case the faculty and student advisors, thought of the CBA and what they felt worked well and did not.

In sum, the four areas of completion and pass rates, pace of assignment submissions, demonstration of course competencies, and student perceptions and motivations surrounding the CBA were evaluated in order to address the problem and help university leaders determine how to improve the program. Additionally, an evaluation was needed to see if there was a difference in success between the graduate and undergraduate students and if there were differences in performance for the type of course that was provided in the CBA format. These were the main things that leaders needed to know in order to in order to improve the program and determine whether to expand the program.

Research on competency-based programs and courses is lacking, and more studies are needed regarding who is best served by competency-based models as well as how such programs or courses are performing (Kelly & Columbus, 2016). Leaders at intuitions offering competency-based programs will increasingly be asked to provide evidence of how students in CBE programs compare with those in programs that are not competency-based (Soldner & Parsons, 2016). An evaluation of Union State's CBA program could serve to add the body of knowledge about competency-based programs, and could provide evidence for whether it met students' needs, was of high quality, and resulted in good outcomes. The field of higher education could benefit when the research results from the CBA program evaluation are shared.

## Rationale

An evaluation of Union State's program was needed to help university leaders determine what to improve prior to implementing the program on a wider scale.

Additionally, leaders at Union State needed evaluation data in order to make a determination about whether the CBA program benefitted its students. Specifically, an evaluation was needed to determine what types of courses were most appropriate to offer in the CBA format. The evaluation also provided grade data and assignment completion data to help leaders determine if there were certain subject areas or levels of students, either graduate or undergraduate, that perform better. Finally, an evaluation was necessary to get input from students and staff about what they felt should be improved prior to expansion. Leaders at Union State needed an evaluation in order to make a determination about whether CBA was a viable format to offer to some or all students as an alternative to taking traditional online coursework.

An evaluation could also serve a wider role in contributing to the research on competency-based education. Even though competency-based education models have been in practice in certain areas, such as the medical and technical fields, for some time, few studies are available that provide evidence that they are effective (Barman, Silèn, & Bolander Laksov, 2014; Gallagher, 2014). On a national level, adoption of CBE models is likely to be slow and incremental due to the regulatory environment, so research showing what does and does not work is important as competency-based programs continue to expand at colleges and universities (Schejbal, 2015). This evaluation of the CBA program could not only provide insight into the effectiveness of a competency-based program at Union State, but it might contribute to the growing field of knowledge that could help move the current regulatory environment in the U.S. to be more open to competency-based, vs. time-based, models. Not only did the academic leaders of Union

State need a program evaluation for the purposes of improvement, but an evaluation was needed so that the university could show due diligence to the Board of Governors and accrediting agencies in the event that the university was questioned about its decision-making processes regarding the CBA program. Therefore, the purpose of this study was to conduct an evaluation of a competency-based program for the purposes of program improvement and to determine whether the program benefitted self-directed and self-motivated nontraditional students in earning college credit at a decreased cost at their own pace.

## Definition of Terms

*Assessment:* Assessment refers to the process of evaluating whether a student has met a competency (Everhart, Bushway, & Schejbal, 2016). Klein-Collins (2013) described assessment as being the core of CBE because it validates the learning that has taken place. Assessment can also refer to the actual measure that is used determine what a student knows and can do (Klein-Collins, 2013). For example a math exam would be an assessment of certain quantitative competencies.

*Competency:* Everhart et al. (2016) noted that the rise of CBE has brought with it multiple interpretations of the word competency, and those interpretations can differ between academics and employers. They stated that competencies are statement of what an individual can do, meaning that an individual has the requisite knowledge, skills, and abilities to do a certain job or task. There has been work done by the Lumina Foundation to define the competencies needed to earn certain types of credentials. The Lumina Foundation's definition of competency includes having learnable and measureable

behavior-based characteristics (Lumina Foundation, 2015). Everhart et al. (n.d.) combined those two definitions into, "A competency is a specific knowledge, skill or ability that is both observable and measurable" (p.5). The differences between the word outcome and competency are subtle, and many educational professionals use the word *outcome* or *learning outcome* interchangeably with the word competency (Morcke, Dornan, & Eika, 2013). There is as of yet no agreement on how to define competency as compared to learning outcome (Nodine, 2016).

*Competency-Based Assessment (CBA):* An alternative, competency-based course option that was piloted at Union State University. The CBA was a traditional online course that had been converted into a competency-based structure so that students could complete it at their own pace. There was no instructor working with students on a weekly basis; there was only a faculty evaluator that assessed the student work as it was submitted on a weekly basis, with all work being assessed by the course completion. Because there was no instructor, the CBA could be provided to students at a much lower cost than the traditional online version of the course. When the students successfully demonstrate the course competencies, they were awarded credit for the course. Students demonstrated that they attained the competencies by completing the assignments in the course. The assignments were all aligned with the course competencies, so by completing the assignments at a satisfactory level, students were demonstrating achievement of the competencies.

*Competency-based education:* Refers to a type of education where student progress is determined by their demonstration of competencies (Everhart et al., n.d.).

Approaches vary, but the common factor is that time is not considered a measurement of learning (Schejbal, 2015). The focus instead is on student demonstration of what they know and are able to do to make progress and earn college credit rather than on time spent on learning (Everhart et al., n.d.; Klein-Collins, 2013). Assessments are developed in order to measure the mastery of the competencies in order to determine if credit can be offered (Kelly & Columbus, 2016). Soldner and Parsons (2016) said that CBE programs follow two central principles: that requirements to earn credentials are communicated in terms of measurable competencies, and that learning is demonstrated through assessments of those competencies. The approaches to CBE range from conventional models that are tied to a class or semester and have high faculty involvement, to less conventional approaches that may have limited faculty roles, high technology use, such as online adaptive learning, and are not tied to a class or a traditional time-bound semester (American Council on Education, 2014; Kelchen, 2015). If a student wishes to be eligible for federal financial aid, students can take a CBE program that falls into one of two camps: a program that allows students to complete competency assessments at their own pace and then converts completion into a credit hour structure, or a program that abandons credit hours and falls under the direct assessment model that was approved by the Department of Education (McClarty & Gaertner, 2015).

*Direct assessment program:* As defined by the Department of Education, a direct assessment program is defined as an instructional program that "in lieu of measuring student learning in credit or clock hours" utilizes direct assessment of student learning (United States Department of Education, 2013, p.1). In the direct assessment model,

which is a subset of CBE, student demonstrate defined competencies and progress through them based on assessments, with no connection to time or credit hours (Lacey & Murray, 2015; Nodine 2016). Programs that receive accreditor approval and meet Department of Education guidelines are eligible for Title IV funds (McClarty & Gaertner, 2015).

*Outcome-based education:* Outcome-based education (OBE) refers to education that was developed and designed based on learning outcomes, which, as noted in the competency definition, are also called competencies. Thus, it is quite common for studies to use the term CBE when describing a program that is only designed around learning outcomes (see studies by Kerdijk, Snoek, van Hell, & Cohen-Schotanus, 2013 and Khaled et al., 2014 for examples). Most post-secondary institutions have designed courses and program around learning outcomes, mainly due to the expectations of regional and programmatic accreditors (Kuh, Jankowski, Ikenberry, & Kinzie, 2014). The main differentiator between OBE and CBE is that CBE is intended as a replacement for time based education and CBE has implications on the acquisition of federal aid and student loans (Eaton, 2016).

*Nontraditional learner:* This term refers to the wide range of college students who are typically 25-64 years old, in the workforce, and would like to pursue a postsecondary credential while balancing work and other responsibilities (Soares, 2013). The CBE model across the United States is aimed at serving the over 35 million adults who have some college and no degree that fit into this nontraditional category (Riskind, 2014).

*Traditional online course:* Within this study, the term traditional online course refers to the typical online course at Union State University. In the traditional online course there is an instructor that facilitates the class and students must hand in weekly assignments and participate in asynchronous weekly discussions.

*CBA online course at Union State University:* In a CBA online course, the traditional online course was converted into a CBA by changing discussion questions into short assignments and leaving all other assignments intact, thus ensuring that all course learning outcomes were identical in both the CBA and the traditional existing online course. Additionally, there is no instructor who was facilitating the course or posting announcements in the CBA online course. There was only a faculty evaluator who assessed the students work as they completed it.

## Significance of the Study

The evaluation of the CBA program was useful to Union State University because leaders at the university wanted to take a thoughtful and deliberate approach to offering a new program and evaluating its effectiveness with currently enrolled students. The CBA program touched many different areas of the university: academics, student advising, office of the registrar, and faculty. Nodine and Johnstone (2015) wrote that competency-based programs provide challenges in multiple areas such as adapting existing systems and facilitating institutional change. At Union State, for example, leaders had to decide whether the CBA would be pass/fail, what type of credit to award, and what designation would appear on students' transcripts. Adjustments needed to be made to the Student Information System as well as the Learning Management System. Institutional change

occurred as CBA faculty shifted from a service-oriented and supportive mindset to being more hands-off and focusing only on the assessment of competencies. Many departments were involved in the successful implementation of the program, and the needs of multiple stakeholders were considered. As part of the pilot, a structured way of evaluating the program was determined so that leaders could make data-driven decisions both during and after the pilot. As part of that structured process, stakeholders were brought together to kick off the project and to agree on the process to follow, roles and responsibilities, what the group wanted to evaluate, and what data to gather in order to make an evaluation.

The CBA program filled a need at the university to provide an alternate way for its nontraditional students to make progress toward earning a degree. There are other forms of alternative credit that the university offers, but they all result in non-residential, undergraduate, transfer credit. Union State students are only allowed to transfer in a limited number of credits as non-residential, transfer credits. However, if the CBA pilot was successful and expanded, students would be able to earn graduate or undergraduate residential college credit that was not limited in terms of number of credits that can be earned and awarded. Additionally, the CBA program would be a way of earning credit that was not based on student work hours and is instead based on student demonstration of competencies. If the pilot was successful and expanded, students could earn most of their degree under the CBA model.

The university offered the program because its leaders wanted to expand opportunities and options for its students by allowing them to demonstrate course

competencies in an online modality at their own pace at a greatly reduced cost. Flexibility, access, and affordability have been recognized as important issues for nontraditional learners who are seeking a degree and may already have some college credit (Berrett 2015; Eaton, 2016; Nodine & Johnstone, 2015). Competency based models are being explored at many universities as a way to potentially address those issues (Nodine & Johnstone, 2015; Riskind, 2014). Thus, by evaluating the CBA program, there was a potential to benefit not only Union State's students, but to also make original contribution to the field by providing data on student perceptions of their experience, their performance, and their behaviors in a competency-based learning environment. The perceptions of faculty and student advisors regarding the CBA model were presented as well because they were the two other groups that were supporting the students throughout their enrollment in the CBA.

## Research Questions

Because the purpose of the study was to determine how well the CBA pilot program met its goal of benefitting students, the research questions were guided by the summative program evaluation format. In a summative program evaluation, specific goals of the program are identified and the questions center on whether the goals are met in order to judge the program and its success (Lodico, Spaulding, & Voegtle, 2010). The main goal of the CBA pilot was to benefit students in earning college credit at their own pace at a decreased cost. The following questions were used to guide the evaluation of the study.

Research Question 1: How did students in the CBA program compare to students in the traditional online program with achievement of competencies?

$H_0$1: Achievement of competencies of CBA students and non-CBA students are the same.

$H_a$1: Achievement of competencies of CBA students and non-CBA students are different.

Research Question 2: What was the pace at which all students completed the assessments in the CBA within the given time period?

Research Question 3: What are the completion and pass rates of both graduate and undergraduate students enrolled in the CBA program?

Research Question 4: What are the stakeholders' perceptions of the CBA program?

## Review of the Literature

The literature review for this program evaluation was focused on the area of competency-based education. First, I presented the conceptual frameworks that ground a competency-based model for educating students. Then I provided an overview of the major themes that appear in current literature in the area of competency-based education.

### Conceptual Framework

The competency based structure of the CBA program is supported by concepts of adult learning theory. The andragogical model of adult learning was originally presented in *The Adult Learner: A Neglected Species* published by Malcolm Knowles in 1973. As of its eighth edition, Knowles, Holton, and Swanson (2015) have presented six core adult learning areas: learner's need to know, self-concept of the learner, prior experience of the

learner, readiness to learn, orientation to the learning, and motivation to learn. These areas have relevancy to an online educational model like the one at Union State which is focused on providing industry-relevant coursework that prepares nontraditional students to change or enhance careers.

Of the six areas, the ones that are most pertinent to an online, competency-based model are the learners' self-concepts, the role of the learners' experiences, and motivation.

1. Learners' self-concept: According to Knowles et al. (2015), adults have a deep need to be seen as capable of self-direction. The CBA pilot program was geared toward adult learners who felt they have the requisite skills and competencies to work through the CBA course materials on their own, without direct instruction or guidance from a faculty member. Students who were attracted to a self-directed and self-paced model were the target audience for the CBA pilot.
2. The role of the learners' experiences: Knowles et al. (2015) recognized that learners come into the educational environment with a variety of life and work experiences. One reason competency-based education serves some students well is because it allows them to move quickly through areas where they already have competency, and then take the time they need to work through areas where they need to learn core skills or knowledge (Schejbal, 2015). Most nontraditional students in CBE programs are already in the workforce and can be attracted to this sort of time-saving flexibility (Ordonez, 2014).

3. Motivation: Adult learners are responsive to both external and internal motivators, such as getting a better job, higher salary, and higher quality of life. When an adult learner enrolls in an online, career-focused school like Union State, it is typically to complete a degree or go into a new field while juggling other life responsibilities such as work and family. These types of students are motivated to complete educational goals and earn credentials that are valued in the workplace (Morrison, 2016; Nodine, 2016).

In sum, the CBA pilot program was geared toward self-directed, self-motivated adult learners with a variety of life experiences. The principles of andragogy were a theoretical foundation for career-focused, online learning because adult learners can make connections to their own lives and use prior knowledge to interpret or expand their learning experiences. Additionally, the theoretical foundation of andragogy was applicable to an online, competency-based model because it fit in well with self-directed and self-motivated learners. Finally, the framework of andragogy was in line with the overall goal of the program to see if students benefit from the program because principles of andragogy recognize that adult learners are motivated to learn in order to keep growing to fulfill both external and internal motivators (Knowles et al., 2015). Students would not enroll in the CBA program if they did not believe it would benefit them and help them achieve their goals of completing their degree.

The self-direction and motivation aspects of adult learning theory correspond to another theoretical framework that can be applied to with an online, competency-based educational model: Bandura's social learning theory. The self-paced, self-driven model

used in the competency based education relies on students' qualities being self-regulated and self-directed. According to Bandura (1977), one of the key features of social learning theory is the role of self-regulation, which means that "people are able to exercise some measure of control over their own behavior" (p. 13). This applied to the self-paced model of the competency-based program in that students had to regulate their own behavior by staying on track and completing the assessments on their own schedule in order to finish. For example, at Western Governor's University (WGU), a university that provides online competency-based programs, students pay a flat rate per semester and can finish as much or as little as they want (Mendenhall, 2012; Schejbal, 2015). Thus, students must control and regulate their own learning in order to complete their coursework.

There is also a motivational component to social learning theory. Because people are able to anticipate future consequences of behavior, it can serve to motivate them into action (Bandura, 1977). As it applied to the CBA program, students could anticipate future completion of the CBA which could motivate them to finish in the self-paced format. Bandura described the many benefits of people engaging in self-regulated change. By motivating themselves, even when it results in self-denial, there are personal rewards and benefits—in this case to improve their skills and attain their degree. This motivational component was recognized by university leaders as a key success factor for CBA students. As part of the CBA screening process, students were asked whether they felt they could be successful completing the course on their own without the guidance of a faculty member. Bandura stated that people's convictions about their own effectiveness will determine whether they will even attempt a difficult situation. Thus, university

leaders believed a student would not try the competency-based model unless they felt they could be successful. Bandura refers to this as *perceived self-efficacy*, where expectations of success will determine how much effort they will expend and how long they will persist to reach their goal. The stronger the expectation of success, the more effort they will put in (Bandura, 1977). It has been noted that student motivation is the Achilles heel of the whole competency-based model (Schebal, 2012). This means that checking for motivation – or perceived self-motivation – during the screening process for CBA enrollment was important. Bandura (1977) described several concepts of cognitively based motivation, where thoughts of future outcomes function as motivators. When students commit to a goal, in this case the completion of the CBA, they associate self-satisfaction to the completion of the goal, and will tend to persist until they reach the goal. The CBA format should be effective for motivated students based on the social learning theory, because, according to Bandura (1977) "people function as active agents in their own self-motivation" (p. 165).

Bandura focused on self-efficacy as part of his social cognitive theory. He described perceived self-efficacy as being influential on how long people will persist in the face of obstacles. In the CBA program pilot, participants were screened and directly asked if they were independent learners, learners who are self-motivated and who did not need a lot of guidance or direction. In other words, they were indirectly asked if they had perceived self-efficacy. If students did not feel they possessed those qualities, they should have not been selected for the pilot. Later Bandura (1997) expanded on the theme of self-efficacy as a belief that people possess that their actions will produce desired

results. Van Dinther, Dochy, Segers, and Braeken (2014) found in their study on 138 students in a teacher educator program, that students' self-efficacy was a predictor of students' achievement of competencies. Thus, Bandura's theoretical framework in the areas of being self-directed, internally motivated, and possessing self-efficacy have grounded the rationale for the target audience for the CBA program.

**Review of the Broader Problem**

I conducted a literature review to gain an understanding of the current landscape of competency-based education in meeting the needs of nontraditional learners as well as gain a sense of what research has been done on CBE models. I initially started researching in the Education Research Complete database using the terms *competency based education* and *higher education*. I limited my search to peer reviewed articles that were published in the past five years. As a current practitioner in the area of assessment in the field of higher education, I have been exposed to non-peer reviewed reports and papers written on the subject of competency-based education. When relevant, I use some of those articles in this study periodically to help establish relevancy and currency, particularly when they are published by reputable educational organizations such as National Institute for Learning Outcomes Assessment (NILOA) and Association for Institutional Research (AIR). After completing my initial search, I noticed a lack of peer-reviewed research studies in the area of CBE so expanded my search into career-oriented education in the fields of health sciences, technology, teacher education, and public administration. These fields have defined professional competencies and have performed research studies on competency-based models. After reading the articles and the topics

they discussed and documenting their main ideas, methodologies, and focus, five themes emerged: (a) history of CBE, (b) design and implementation of CBE programs, (c) assessment of competencies, (d) regulatory obstacles to CBE, and (e) viability and potential impact of the CBE model.

**History of CBE.** College credit has been traditionally awarded based on the credit hour, which started when the Carnegie unit was established in 1906 (Riskind, 2014). The Carnegie unit was originally created as a way to determine which faculty were eligible for a pension fund and was not intended as a way to measure learning (Schejbal, 2015). Conversations about measuring competency rather than attendance began when the Higher Education Act of 1965 was enacted (Ordonez, 2014). In the 1960s, competency-based models were being used as part of teacher education reform in an effort to define what a prospective teacher should be able to demonstrate and be able to do in the classroom (Nodine, 2016). Groups such as National Council for the Accreditation of Teacher Education (NCATE) and the Council for Higher Education Accreditation (CHEA) defined the standards and began emphasizing a competency-based approach and a learner-centered environment, which changed the way learning and assessment was approached in the classroom (Cydis, 2014). By the 1970s, CBE programs began emerging as a way to expand educational access to adult learners, and a handful of institutions started offering competency-based education to offer working adults more options (Berrett, 2015; Nodine, 2016; Riskind, 2014).

The common element that all of the early competency-based programs shared was "the identification and assessment of student learning outcomes" (Nodine, 2016, p.7). A

landmark of CBE occurred in 1997 when Western Governor's University (WGU) was launched as a non-profit, online, institution which granted degrees that were based on student mastery of competencies rather than seat time (Nodine, 2016). WGU was created by 19 governors as they recognized the future needs of a highly skilled workforce as well as concerns about access, retention and graduation rates for nontraditional students (Mendenhall, 2012). According to Mendenhall (2012), WGU attracts working adults who already possess some competencies and who do not have the scheduling abilities to attend at traditional class times at a brick and mortar institution.

Expansion of competency-based programs remained fairly limited because eligibility for financial aid continued to rely on time as the main measurement for learning (Schejbal, 2015). However, in 2013, the Department of Higher Education approved awarding financial aid to *direct assessment* programs which opened the door for more universities to begin offering competency-based, self-paced degree programs (Ordonez, 2104). Direct assessment programs are competency-based programs that can be awarded Title IV funding and are completely divorced from the credit hour. Students must demonstrate competencies in order to progress and receive credit in a direct assessment program.

There are currently around 600 colleges and universities that have claimed to be developing competency-based programs (Fain, 2015; Mitchell, 2015; Schejbal, 2015). The current resurgence in interest in competency-based education is attributed to several factors including: accrediting agencies requiring the development and assessment of learning outcomes, individualized instruction available through online technologies, and

pressure from policymakers to control the cost of education while providing access to working adults (Gallagher, 2014; Nodine, 2016). Institutions such as union state are launching competency-based programs for some of these reasons.

**Design and Implementation of CBE programs.** Articles that discuss the design and implementation of CBE programs generally either described how programmatic or course competencies were created in order to create an outcome-based educational program, or they focused on best practices for implementing a competency-based educational model that does not measure learning based on time but on attainment of competencies. Designing curriculum around learning outcomes was a model that began as early as 1949 with Tyler, followed by Bloom in 1956 with his development of a taxonomy of six cognitive levels of learning (Morcke et al., 2013). Since that time, learning outcomes, or competencies, have been defined in a variety of disciplines. In the medical field, due to public concerns about patient safety, the Carnegie Foundation published a book in 2010 updating the 1910 Flexner Report which recommended a competency-based learning approach and standardizing the learning outcomes for medical education (Morcke et al., 2013). Since then, outcome (or competency) based learning models for curriculum design have increased in medical education (Barman et al., 2013). Whitehead, Austin, and Hodges (2013) recognized that defining competencies has the potential to improve health education as long as they are designed and evaluated well. Additionally, Barman, Silèn, and Bolander Laksov (2013) studied how teachers in health sciences education translate competencies into their curriculum design and found

that there is variation in integration, although teachers understood that an outcome-based learning framework supported student learning.

In addition to the medical field, other disciplines have focused on competency-based learning, particularly those with standardized accreditation requirements (Ewell, 2009). For example, Rivenbark and Jacobsen (2014) described how the University of North Carolina at Chapel Hill adopted competency-based learning for a Masters of Public Administration program in order to meet programmatic accreditation requirements. Bennett and Walston (2015) also described how the public health competencies that were developed by the Association of Schools and Programs of Public Health (ASPPH) were adapted and implemented at the University of Oklahoma.

Some articles described how to go about developing competencies when there are not a universal set of competencies defined by an accreditor. For example, in a case study by Ott, Baca, Cisneros, and Bates (2014), they described how their institution designed competencies for a master's degree in Higher Education Administration, including the involvement and role of faculty. They offered their approach as a template for fields without a national set of standards to guide competency development. Similarly, Lucas and Rawlins (2015) offered an approach to teaching business communication that is based on competencies that align with assignments and assessments. They described how to develop and implement competencies while giving the rationale that it helps students gain critical business communication skills which are applicable in many professional situations. In two separate studies, a Delphi methodology was used to develop competencies. Morris, Webb, Fu, and Singhal (2013) described how they used a Delphi

study to develop a set of 13 entrepreneurial competencies in order to determine and define those that are critical for entrepreneurial success. Delphi methodology was also used in a study to build consensus regarding competencies for hospice and palliative care providers, and as a result of two rounds of Delphi surveys the knowledge, skills, and attitudes for physicians, nurses, social workers, and spiritual care providers were created (Kang et al., 2013).

Development of competency-based learning reaches beyond the borders of the United States. In Ghana, Boahin and Hofman (2014) stated that the development of key competencies are needed to meet the demands of industry, and they studied the views of students performing professional tasks after receiving competency-based training (CBT) that was geared toward filling the skill gaps that traditional education left. They found that there is an indirect effect of CBT on the acquisition of skills. Additionally, Koenen, Dochy, and Berghmans (2015) studied 26 institutions across Flanders and the Netherlands and stated that, even though competency-based learning and teaching has expanded nationally and internationally, the majority of the institutions designed their educational programs through a mix of traditional and competency-based methods. They found, as a result of their phenomenographic analysis, that there are still some obstacles that stand in the way to further implementation of CBE. These include lack of time to develop instructional methodologies and assessments based that are on competencies and lack of support from administration and policymakers to address issues such as large group sizes and the need for more guidelines and standards. However, ultimately the design of learning experiences based on competencies has led the way to implementing

competency-based models that award college credit for achievement of competencies rather than time spent in a classroom.

Designing a CBE program that does not measure learning based on seat time has been the subject of recent articles--particularly when the publication is focused on change and innovation in higher education. In the ebook *Game Changers: Education and Information Technologies,* Robert Mendenhall (2012) outlined the model that is used at Western Governor's University, from the disaggregated role of faculty, to the grading of assessments and development of curriculum. Leaders at other intuitions experimenting with CBE have followed suit. Clerkin and Simon (2014) presented the model used at Southern New Hampshire University's College for America. Their CBE program launched in 2012 with high employer input under the direct assessment model that was approved by the Department of Education in 2013. It included industry partnerships that became their primary source of new enrollments. There were no courses in their degree programs, only defined goals and competencies, and students completed projects of varying complexity in order to progress (Clerkin & Simon, 2014). Cooper (2016) described in a case study how faculty were involved in the development of a CBE program and found that intentional strategies for faculty involvement are the key to developing a sustainable program.

Some articles have been published to guide leaders and present best practices as they seek to develop their own models. In a 2014 Educause Review article, Bushway and Everhart described the quality indicators that should define CBEs: curricular architecture, valid and reliable assessments, and comprehensive student success resources. Similarly,

Johnstone and Soares (2014) prescribed the necessary components of CBE: robust and valid competencies, student support through a self-paced model, effective learning resources, and secure and reliable assessments.

As with any new educational model, there are challenges to implementation. For CBE, these include labor-intensive curriculum development, necessary adaptations to enrollment systems, and providing needed learner supports (Nodine & Johnstone, 2015). As the model continues to take hold, more articles are becoming available. Beginning in 2016 an entire journal was launched focused on CBE, the *Journal of Competency-Based Education*, with its goal to advance the study and practice of CBE (Kelly & Columbus, 2016). As peer-reviewed resources continue to expand, it may lend more credence to CBE as an accepted alternative to traditional education.

**Assessment of Competencies.** Articles categorized within this theme generally fell within two camps: research results regarding the effectiveness of curriculum that was designed around competencies or the development and validation of competency measurements. Morcke, Dornan, and Eika (2013) studied how having predetermined outcomes affects learning and teaching in undergraduate medical education. They recognized that, even though outcome-based learning has been widely adopted in medical education, there is little empirical evidence that it is effective. They concluded that the presence of outcomes does not affect a teacher's teaching. Even though the presence of outcomes worked naturally with assessment, it did not always work naturally with teaching and learning activities (Morke et al., 2013). Kerdijk, Snoek, van Hell, and Cohen-Schotanus (2013) also questioned the effectiveness of competency-based learning

in medical education, and they performed a study to determine whether competency-based education resulted in knowledge loss due to the time being devoted to the practice of competencies vs. knowledge acquisition. Although they found no significant differences in student performance, they concluded that the common assumption that a competency-based educational approach results in graduates who are better prepared for medical practice is not supported in their research (Kerdijk et al., 2013). Another medical education study, this one for nursing education, found when students were given competency-based assessment criteria vs. performance-based, which is typically focused on what a student does at a task-level, that students performed better when they had performance-based criteria (Fastrè, van der Klink, Amsing-Smit, & van Merriënboer, 2014).

Some studies have found that competency based approaches were effective in medical education. One such study was done on a competency-based continuing education nursing program which took place at the workplace. The researchers found that, with proper support from leadership and management, a competency-based approach was effective as a method for workplace professional development and contributed to the development of nurses' critical reasoning and clinical leadership competencies (Goudreau et al., 2015).

Outside of the medical education field, a study by Scholtz, Cilliers, and Calitz (2012) was conducted in the area of information systems education and found that there were improvements in competency-attainment after a competency-based and learner-centered education framework was implemented in the area of enterprise resource

planning (ERP). Even though the study finding in the area of the effectiveness of competency or outcomes-based education have been mixed, many of them cited the need for valid and accurate measurements as a need that goes hand in hand with development of appropriate competencies. Therefore, one of the roadblocks to proving the effectiveness of competency-based approaches is a lack of standard measurements for achievement of competencies.

Because there are no standards of measurement for competencies, there have been several studies on the effectiveness of different measurement tools that were developed internally for the purposes of measurement of competencies. One way to assess competencies is by using assessment centers, which have become increasingly popular in Germany to assess medical education (Rotthoff et al., 2014). In a study of an assessment center that measured competencies in medical education, Rotthoff et al. found that using assessment centers that focus on measuring competencies can successfully predict future performance in core medical competencies.

Other studies have been done on the instruments themselves, such as one where students assessed their competencies with an instrument and then explored its validity (Khaled et al., 2014). The researchers found that the self-assessment instrument showed more validity with competencies that are concrete versus abstract (Khaled et al., 2014). In another study, researchers saw a need for a standardized tool to assess nursing informatics competencies in undergraduate and graduate program, so they and developed the Self-Assessment of Nursing Informatics Competencies Scale (SANICS). When they implemented the tool and tested its validity, they found that it was a valid and internally

consistent instrument for nursing students and can potentially help fill the need for a consistent tool to assess the information technology skills in nursing students (Choi & Bakken, 2013).

Other studies have been performed on models for measuring competencies, such as a study done on the Amalgamated Students Assessment in Practice Model (ASAP) for nursing educators, which was found to be effective in identifying areas of deficiency (Zasadny & Bull, 2015). Another model utilized interviews and 360-degree feedback to assess engineering students' leadership competencies in order to determine which competencies were exhibited by fourth year engineering students (Özgen, Sánchez-Galofrè, Alabart, Medir, & Giralt, 2013). In their study the researchers were able to collect data through interviews and 360-feedback and found that senior engineering students exhibited emerging leadership behaviors such as teamwork, interpersonal communication, and commitment to learning (Özgen et al., 2013).

The many different approaches for measuring competencies has been recognized as one of the continuing issues in higher education. After studying this issue, Zlakin-Troitschanskaia, Shavelson, and Kuhn (2015) concluded the following: the measurement of competencies is very important and highly complex, there are many different approaches to measuring competencies, and there is very little research on the effectiveness of the measurement tools. In their international study, they provided an overview of the current state of competency measurement, and they advocated for "a broader body of objective and valid research and assessment that specifically measure competencies in higher education" in order to ultimately improve teaching and learning

(p. 402). On a smaller scale, but along a similar vein, in a Malaysian study that looked at assessment practices at a competency–based vocational college, the researchers found a variety of different methods were being used and advocated for a standard set of instruments to measure competencies that were fair, reliable, valid, and consistent (Ab Rahman, Muhamad Hanafi, Ibrahim Mukhtar, & Ahmad, 2013). One study tried to achieve the goal of developing a world-wide set of standard competencies in eight different subject areas. The researchers were able to develop a common set of competencies that were put through a tuning process. The researchers concluded that European, Russian, and American university systems formulate competencies in a similar way, so there is a good possibility of converging competencies into standard sets that can be used among universities all over the world (Lunev, Petrova, & Zaripova, 2013). Competency-based learning should expand and gain credibility when there is common understanding and shared agreement on what should be learned and how to measure it.

**Regulatory obstacles to CBE**. Even though there is recognition that CBE is a viable model, there is also recognition that obstacles stand in the way before the full potential of CBE can be realized. CBE is likely not to be adopted on a wider scale until there is regulatory reform with policies to support it (Johnson, Adams Becker, Estrada, & Freeman, 2015). One of the biggest obstacles is addressing the issue of financial aid which awards funds based on the federal definition credit hour (Klein-Collins, 2013). One solution colleges are taking is to convert their CBE frameworks into credit hours (Klein-Collins, 2013). Schools such as WGU and Southern New Hampshire University translate competencies back to credit-hour equivalencies for operational purposes (Silva

& White, 2015). Another solution is to redefine the credit hour to allow programs to use what is known as direct assessment to measure student learning instead of the credit hour (Laitinen, 2012). Prior to being able to offer financial aid for a direct assessment program, an institution must receive approval from the U.S. Department of Education, which can be burdensome (Schebal, 2015). Even though there are groups working to define how these details can work, an issue is that "the Department of Education's definition of a direct assessment program is unclear" (Klein-Collins, 2013, p. 15). This has created a level of uncertainty, which Laitinen (2012) called "a barrier to innovation" (p. 18). Laitinin offered several solutions that the federal government can take to begin funding learning, rather than time: innovate within the existing credit hour structure, innovate through experimental sites, and abandon the credit hour and innovate through direct assessment. However, Silva and White (2015) wrote the credit hour is not preventing innovation, and until there is a commonly accepted understanding of what students should learn and how it will be measured, the credit hour will continue to be used because it is tied to so many administrative functions and transactions within higher education.

Another facet of the regulatory environment is the role of regional and programmatic accreditors. Accreditation is another barrier to widespread adoption (Johnson et al., 2015). The Department of Education is asking that in order to apply as a direct assessment program, the program must first receive approval from its regional accreditor (Klein-Collins, 2013). The regional accreditors have approved some CBE programs so they can apply to the Department of Education, but thus far their

involvement is modest (Eaton, 2016). Furthermore, accreditors are reactive and have not articulated standard expectations for institutions that wish to seek approval for a CBE program (Eaton, 2016). Even though accreditors are expecting growth in this area, they are using the same standards to evaluate programs that are used for all other educational efforts, leading Eaton (2016) to conclude that accreditors will most likely evaluate CBE programs within existing broad accreditation standards. Smith (2013) noted that if the Department of Education and accrediting bodies would create a separate category of accreditation for competency-based programs, then would shine a spotlight on the "deficiencies of the current system" (p. 36). Smith argued that competency-based credentialing should apply to the awarding of all credentials, not just those labeled as CBE programs. Until the Department of Education and accrediting bodies can set clear standards and expectations needed to meet financial aid requirements as well as accredit programs, CBE is not likely to become widespread.

**Viability and potential impact of the CBE model.** CBE is seen as viable because of its potential to solve the some of the key issues previously mentioned such as college affordability, quality, and the rising employer needs of an educated workforce. CBE advocates cite its many benefits such as low tuition costs, ability to be relevant to workplace needs, the potential to accelerate degree completion, and individualized and self-paced instruction (Nodine & Johnstone, 2015; Ordonez, 2014). There have been critics who point out that CBE may be appropriate for skill or task-based learning, but have questioned whether CBE is educating the whole individual. Gallagher (2014) raised concerns about CBE's fit in higher education and said that we can look to the past for

lessons regarding CBE, most notably that it resulted in hyper-individualization, a loss of the social aspect of constructing knowledge, and a focus on the having students demonstrate skill sets to be part of the workforce rather than the education and betterment of citizens. As CBE continues to evolve, Gallagher (2014) cautioned that we would do well to keep in mind what the purpose of higher education is.

However, keeping in mind the needs of nontraditional students, it can be beneficial to provide different educational options. While CBE may not be the best choice for every student, Nodine and Johnstone (2015) noted that in today's environment of innovation and serving many different kinds of nontraditional students with some college and an abundance of life experiences, it is better to provide students with different options for completing a degree. Sandeen (2014) described CBEs as being a good fit for the estimated 36 million Americans with some college and no degree and also pointed out that CBE is a natural fit with the expectations of accreditors who are requiring the creation and assessment of learning outcomes. Those requirements are not likely to change due to the extremal needs of accreditors, the federal government, and other third party organizations requiring the assessment of student learning (Ewell, 2009). Moreover, as innovation in higher education remains a priority, CBE will likely continue to be looked at as a potential to meet the needs of different learners. For example, CBE was a topic of conversation when then President Obama met with college and university presidents in 2014 to discuss issues in higher education such as access and increasing the number of graduates (Lowry, 2014).

While the potential of CBE to address current issues has been widely discussed, studies demonstrating the viability and effects are few and have had mixed results. Most studies have focused on outcomes-based educational programs which have been more prevalent in disciplines that have established standard competencies due to accreditation requirements. Today there are some CBE programs with a liberal arts or general education focus, but most are in professional or vocational fields such as nursing, teaching, and information technology (Riskind, 2014).

One study on health sciences education found that teachers understood outcome-based education and recognized that it could support student learning, but bureaucratic accountability demands created tension and hindered curriculum design (Barman et al., 2014). In another article, a competency-based approach was seen as a solution for the current state of healthcare education with the potential of reducing inefficiencies in the traditional time-based structure (Shannon et al., 2013). Thibault (2013) wrote about the competency-based potentialities and noted for many health professions, the training is unnecessarily long and the time demands keep increasing due to new content and requirements, so he saw a competency-model as one solution to this issue. While programmatic accrediting standards have driven a shift to outcomes-based structure, Broom and Turner (2015) recognized that competency models are useful and can have an impact on healthcare education even when not required by accreditors. In their case study, they illustrated a process to extend levels of competencies to areas of concentration in healthcare beyond the standard requirements currently in place for healthcare managers.

Finally, in terms of impact, Soares (2012) addressed how CBE can be seen as a model that is here to stay and be truly disruptive, which he defined as a force that changes the industry through technology. He argued that standardized definitions of competencies are integral to whether CBE can be scaled to a level to be disruptive, and said that all constituencies must have the same definition of what success looks like. The sum of these articles indicated that, while the viability and impact of CBE has been looked at and discussed, there is more work to be done before it will be clear how much the CBE model can be sustained and what kinds of long-term effect it will have on higher education.

## Implications

The implications for the direction of this project study are twofold: there are implications within the local setting as well as within the larger field of education. Within the local setting, the evaluation can serve to help leaders at the university understand the type of student that the CBA program is best suited for and how to best help students in the CBA program succeed. Because the evaluation gathered input from not only the students but from the two main support groups that touch the students, the faculty and student advisors, the evaluation provided insights into all if their perceptions of how to best support students and ensure their success.

Within the larger field of education post-secondary educational providers are under pressure to not only meet the needs of employers but to meet public pressures to decrease costs while achieving high quality (Klein-Collins, 2013; Lowry, 2014; Schebal 2015). As higher education continues to be faced with issues such as increasing tuition costs and rising student loan debt (Gallagher, 2014; Ordonez, 2014), both policymakers

and the public are questioning the value and the quality of higher education (Schejbal, 2015). Competency-based models are being looked at as a potential solution to meeting employer needs, accelerating degree completion, ensuring students are learning, and decreasing costs to students (Lowry, 2014; Nodine & Johnstone, 2015). Interest in competency-based programs is on the rise in order to address concerns about quality, access, and cost (Berrett, 2015; Klein-Collins, 2013).

Union State's CBA program has the potential to serve as a model for other institutions to be able to offer competency-based education to better meet the needs of nontraditional students. This program evaluation of the CBA program at Union State can potentially establish validity in new models and provide evidence for regulators and lawmakers to create effective policies. New and alternative models of post-secondary education can ultimately influence social change if higher education becomes more accessible and affordable. Alternative models such as the CBA program can benefit both individuals and the larger society as well, particularly if employer needs are met, degree completion is accelerated, and tuition costs are decreased.

The final project deliverable of a formal program evaluation was provided to university leaders in order to inform future directions for the CBA program. Leaders at the university are committed to offering alternative educational approaches in order to meet the diverse needs of nontraditional students. The university's internally developed approaches already include prior learning assessment (PLA) and a competency-based exam option where credit is offered to students who can demonstrate competencies based on knowledge and skills they acquired outside of the university and/or by testing out of

the course. The CBA program may be an additional option, and this project study is a first step for Union State as it continues down the path of offering competency-based models and continues to collect data regarding student success in the CBA program. Leaders can use the final program evaluation to demonstrate to the board and other stakeholders their commitment to making data-driven decisions for the benefit of students.

## Summary

Higher education is faced with the task of meeting the needs of its growing numbers of nontraditional students. In addition to meeting the needs of nontraditional learners, there are growing concerns among the public regarding the quality and cost of education (Klein-Collins, 2013). Competency-based education is one approach that universities are considering as a way to meet the needs of nontraditional learners and address issues of quality and cost (Kelly & Columbus, 2016; Schejbal, 2015). Union State University is one such institution looking to meet the needs of its nontraditional student base, most of whom are working adults over the age of 25. It developed and piloted a competency-based program called competency-based assessment where the intention is for students to pay approximately one-third less tuition and demonstrate competencies in an online course at their own pace in order to earn college credit. The university leaders believed the program had the potential to benefit students who are self-directed and self-motivated by offering college credit at a lower cost while allowing students to complete assessments at their own pace. The problem addressed in this study was that the CBA program needed to be evaluated to determine whether it benefitted

students. The evaluation may be used by leaders at Union State to determine whether to continue with the program, and if so what improvements need to be made. Additionally, the model has the potential to help students far beyond Union State. The program evaluation could serve the field of education as a model that could be adopted as an alternative way for students to earn college credit, thereby providing greater access and opportunity to those wanting a post-secondary education.

# Section 2: The Methodology

## Introduction

The purpose of this study was to determine how well the CBA program met the goals of providing students viable and authentic learning experiences in earning college credit in the CBA program. Leaders at Union State University created the CBA program in order to give self-motivated and nontraditional students options for attaining a college degree at a decreased cost at their own pace. The program was entirely new, and university leaders piloted the program so that they could make a decision about implementing it on a wider scale. Additionally, the CBA program touched many different departments of the university that could be asked to change policies and practices as a result of the program; therefore, a program evaluation was necessary to substantiate and document due diligence in the decision-making process.

## Program Evaluation

The methodology for this study was a program evaluation. As defined by Yarbrough, Shulha, Hopson, and Caruthers (2011), program evaluations are systematic investigations of a program for the purposes of decision making that respond to the needs of identified stakeholders and that lead to improvement and ultimately contribute to organizational and social value of a program. The CBA program evaluation met the components of this definition in that it was a systematic and intentional examination of a pilot competency-based program that was in response to the needs of Union State University to provide an alternative pathway for students to earn college credit. Furthermore, the results of the evaluation may lead to programmatic improvements that

will benefit students when the program is implemented on a wider scale. The program has the potential to benefit society as a whole in that any university that offers online courses could adapt this model at their own institution, thus providing more options to students for earning college credit in a flexible manner at a reduced cost.

Unlike an educational research study, a program evaluation helps stakeholders answer questions or make decisions about programs. Educational research, on the other hand, is focused on "systematic methods and techniques that help researchers and practitioners understand and enhance the teaching and learning process" (Lodico, Spaulding, & Voegtle, 2010, p. 10). Typically, an educational research study is not focused on the quality of a specific program; rather, it is a controlled study that addresses gaps in theories or areas of knowledge (Yarbrough et al., 2011). Alkin (2011) noted that an evaluation is decision oriented, as opposed to research which is conclusion oriented. Because the evaluative study of the CBA pilot program was focused on the investigation of a specific pilot for the purpose of decision-making, and it was not a controlled educational study, it was the most appropriate type of methodology to use for this project study.

**Standards for Program Evaluations**

The Joint Commission on Standards for Educational Evaluation (JCSEE) has published standards for program evaluations to address program quality in a systematic way. These standards serve as a guide for program evaluators and define evaluation quality (Yarbrough et al., 2011). There are five attributes of quality that can be applied to each stage of a program evaluation: utility, feasibility, propriety, accuracy and

accountability. Utility standards are focused on the use and usefulness of the program evaluation. Utility standards include how well the needs of program stakeholders were met. Feasibility standards cover how to increase or maintain the feasibility of the evaluation including the effects of outside factors on the evaluation, such as politics. Propriety standards cover any moral, ethical, and legal concerns regarding the evaluation. The accuracy of findings and conclusions are covered in the accuracy standards. Lastly, the accountability standards are supported by all of the other standards and are intended to increase the overall quality of the evaluation through documentation and metaevaluation strategies (Yarbrough et al., 2011). Throughout the CBA program evaluation, the Joint Commission's standards will be applied to each stage of the program's implementation in order to ensure quality.

**Decision and Accountability Evaluation Approach**

The CBA pilot program was evaluated with a decision and accountability evaluation approach. According to Stufflebeam and Shinkfield (2007), this approach engages stakeholders in defining the evaluation and assessing the program's value. On a more philosophical level, this type of approach is also focused on contributing to a "well-functioning democratic society" (p. 198) which fits the CBA program evaluation due to its potential influence of being able to serve society's needs for a more educated citizenry. The CBA pilot program fit the framework of the decision and accountability evaluation approach because its main purpose was to provide information for making a decision. It had an improvement orientation in that it seeks not to prove, but to improve, especially for services that are "morally sound and cost-effective" (Stufflebeam &

Shinkfield, 2007, p.199). The CBA program evaluation fit well into a decision and accountability model because its focus was not only on determining what was beneficial for the university and its students, but the larger society as a whole.

One consideration in an evaluation of this type is to recognize who the stakeholders are. Stakeholders are the people who have an interest in or who are vested in the program (Alkin, 2011). For this particular study, I focused on primary stakeholders, who are individuals that make decisions or who are directly affected by the decisions of the pilot program (Alkin, 2011). The primary stakeholders in the CBA pilot program included the academic provost, who was making decisions about the program, as well as students, faculty, and student advisors, who were the ones primarily affected by the program. Stakeholder needs were kept in constant focus during the pilot implementation, in line with the JCSEE's utility standard U2: Attention to Stakeholders (Yarbrough et al., 2011).

**CIPP Evaluation Model**

The CBA program evaluation was evaluated using the CIPP Evaluation Model. Daniel Stufflebeam and Egon Guba developed the CIPP model in the late 1960s as a decision-making framework (Alkin, 2004; Stufflebeam & Shinkfield, 2007). The acronym stands for an evaluation of contexts, inputs, processes and products. Context evaluations are assessments of the needs, assets, and problems within a defined environment where the program is taking place in order to help define goals. Input evaluations focus on assessing competing plans and budgets for meeting the program's needs and goals. Process evaluations focus on assessing the implementation of a program.

Product evaluations assess how well the program met its intended outcomes (Stufflebeam, 2004). When doing a summative evaluation, these four parts of an evaluation respectively ask, "Were important needs addressed? Was the effort guided by a defensible design and budget? Was the service design executed competently and modified as needed? Did the effort succeed?" (Stufflebeam, 2004, p.246). The CIPP model was an appropriate framework for the CBA program evaluation with its focus on decision-making and improvement. It emphasizes setting goals, keeping stakeholders informed with timely information, carrying out work plans, and deciding how to replicate or expand elements of the program (Stufflebeam & Shinkfield, 2007). These activities all took place during the CBA pilot for the purposes of decision making. Evaluating the program with an established and theory-based program evaluation model provided credibility to the findings and helped ensure that the data that was gathered was appropriate and could be used to help leaders make a decision about the viability of the program.

## Mixed Method Design and Approach

The research design for the program evaluation utilized both quantitative and qualitative data for a mixed method approach. Quantitative data was gathered to answer research questions regarding the achievement of competencies and how students paced themselves in the course. Qualitative data was gathered to get perceptions from students and those supporting the students (faculty and advisors) regarding whether the program met student needs and fostered their demonstration of competencies. A mixed method approach is warranted when a researcher needs to understand both qualitative and

quantitative data in order to answer the research questions (Creswell, 2012). This was the case with the CBA program where a mixed methods approach was taken to provide a well-rounded data set to see if the goals of the pilot program were achieved. According to Alkin (2011) a mixed method design is a reasonable approach for program evaluations due to the varied nature of the research questions that typically occur in a program evaluation. Because the research design and methodology need to match the questions, and in this program evaluation there were multiple questions that required both quantitative and qualitative data, a mixed method design was appropriate. Creswell (2012) described how mixed methods can be used when numeric results do not provide the entire picture and qualitative data is needed to provide full details, as was the case with the CBA program evaluation. For example, only knowing about student performance via numeric data would not be enough to know the whole picture about whether to expand the program. Qualitative input from the perspectives of students, faculty, and student advisors was also needed to get full detail about how the program went and what should be improved.

For the CBA program evaluation, I gathered several types of qualitative and quantitative data. According to Stufflebeam and Shinkfield (2007) many data collection methods may be utilized for a decision and accountability program evaluation model of program evaluations including surveys, interviews, and even quasi-experimental and experimental designs. For the CBA pilot program evaluation, quantitative data was gathered from four sources: competency achievement data gathered from assignments, completion and pass rate data from student grades, data regarding the pacing of students'

assignment submissions through the CBA coursework, and there was a Likert-type survey that students completed that provided numerical data. Qualitative data came from three sets of interviews: interviews with the students who participated in the CBA, interviews with student advisors, and a focus group interview with faculty. Advisor and faculty interview data was gathered because they were in direct support of the student through the CBA process. These interviews were transcribed for qualitative data.

Data collection occurred concurrently, but in three different phases. Each phase of the CBA consisted of one term where four courses were offered in the CBA format with five students in each course (20 students per phase). Each term was eight weeks long. A total of 12 courses were offered in the CBA format over three terms. Near the end of each phase, students completed a survey developed by the university. Adjustments and improvements were made based on survey data prior to the launch of the next phase. This focus on improvement after each phase is a key component of the CIPP model, which emphasizes that an evaluation's most important purpose is to improve, rather than to prove (Stufflebeam, 2004). Once the third phase was completed there was not only survey data gathered but additional data was gathered: data on completion and pass rates, data on rate of assignment completion, data on the attainment of competencies, and all interviews took place once the third phase was completed.

**Evaluation Goals**

The evaluation goals were to perform a summative evaluation to assist internal stakeholders in determining whether the CBA program provided students a successful experience in earning viable college credits, and ultimately to decide whether to expand

the program beyond its initial 12 pilot courses or revise the program. In order to determine whether students had a successful experience in the CBA program, the program evaluation looked at several performance indicators. Quantitative data from grades was looked at to compare how students in the competency-based course compared with students in the traditional online course. Quantitative data from students' rate of assignment completion was gathered and analyzed to see if pacing was an issue for students. The final piece of quantitative data came from student survey responses to determine the number of students who strongly agreed, disagreed, and strongly disagreed with survey questions. As for the qualitative data, interviews with students and student advisors as well as focus groups with faculty were transcribed and coded to look for trends and other information regarding whether goals were met.

## Setting and Sample

Participants in the CBA pilot program were selected based on several criteria. The students who enrolled in the CBA had to be fully-admitted, degree seeking bachelor or master-level students who were in good academic standing. The student had to have successfully completed at least one traditional online course in order to be eligible to take a CBA, and the student had to have a cumulative GPA of 3.0 or higher. In recognition of Bandura's theoretical framework of students relying on self-regulation and self-direction, participants were informed that they needed to be self-motivated and independent learners who did not need individualized guidance to be successful. The participants were made aware of the necessities of these character traits and were asked to self-assess these qualities in themselves by the student advisors prior to enrollment. Because the Union

State is a degree-completion institution, there were no participants who were first time freshmen who did not have some form of credit already completed. Most bachelor students had some form of college already completed, and the master's level students already had a bachelor degree. This nontraditional demographic makes up the majority of students who are typically interested in enrolling in a competency-based program (Kelchen, 2015).

Interviews were scheduled with students, faculty, and advisors at the end of the third phase. See Table 2 for a calendar of each CBA phase and Table 3 for clear indication of the data collection for each phase. I requested interviews from the students who completed the CBA and maintained enrollment up until the last day of the course (those students who did not withdraw). I requested interviews on a volunteer basis, with the goal of completing at least 10 total interviews with at least three of those interviews occurring with students who did not pass the CBA. As for the faculty, I requested a focus group interview with them after the completion of the CBAs and participation was voluntary. Interviews with advisors also occurred at the end of the third phase and were held on a voluntary basis. If all advisors agreed to be interviewed, there would be a total of two advisors who were interviewed.

In order to compare competency achievement data between the 60 CBA participants and students taking the traditional online course, students from the traditional online course were identified for the purposes of comparing performance data. For every CBA there is a corresponding traditional online course that is available. In order to differentiate the courses in the university's student information system, an *A* was placed

after the course code for the CBA. For example, MGT300 Principles of Management is the traditional online version of the course, and MGT300A is the CBA for Principles of Management. To test the null hypothesis that achievement of competencies of CBA students and non-CBA students are the same, I intended on using a chi square for goodness-of-fit.

The researcher-participant relationship was established in the interview stage. I had a role as both the researcher and I was also the project manager for the CBA program implementation. As the project manager, my role was to keep tasks on track, and I did not hold a supervisory role over any of the faculty or staff. Due to my project manager role, I had preliminary contact with both the faculty evaluators and advisors to explain the CBA model so that they could effectively work with students; however, neither the faculty nor staff had a direct reporting relationship to me. At the culmination of each phase of the CBA, I asked both the faculty and the advisors if they were willing to participate in voluntary interviews as part of the program evaluation study. Relationships with the students were established by asking for volunteers who were willing to participate in an interview at the culmination of the study. All student interviews were voluntary and did not affect student performance in the CBA as they took place after the CBA was completed.

Participant rights were protected in a variety of ways. First, I acquired permission of the Walden University Institutional Review Board and Union State to gather the intended data. I protected the anonymity of participants by not using any names or other identifiers that could be traced back to specific individuals. I gained interview

participants consent to use their interview in the study and also sought permission from Union State to interview all participants. I acquired informed consent from all interviewees and ensured they knew that participation was voluntary. Finally, I ensured no harm to participants by protecting their identity and being truthful when reporting all findings.

## Data Collection Strategies

### Qualitative Sequence

For the qualitative sequence of data collection, several instruments were used. There were three phases of CBAs consisting of four courses offered in the CBA format with five students enrolled in each course. For the first phase of the CBA, the university developed a student survey which had a qualitative portion on it (as well as some quantitative questions). For the second and third phases of the CBA, students were administered the same survey containing the same qualitative questions and there was also student interviews, advisor interviews, and a faculty focus group interview which occurred after the completion of the third CBA phase. Interview questions centered not only on what students liked and disliked, but also addressed constructs in the theoretical frameworks for the study. For example, students were asked how they perceived their own ability to self-regulate their behavior to meet their personal goals. This ties in with Bandura's social learning theory which posits that people are able to self-regulate their behavior, particularly when they are able to anticipate future results from their behavior. Additionally, students were asked what motivated them to complete coursework and whether their prior experience influenced their success. These questions are based in the

constructs of adult learning theory that focus on the role of motivation and the role of the learners' experiences. All of the interview and focus group protocols are provided in Appendix C. The student survey instrument is provided in Appendix D.

**Student interviews.** The student interviews were semistructured interviews that were guided by a set of questions. A researcher-developed interview protocol was followed. Approximately 40 students from phases two and three of the CBA pilot were contacted after the end of phase three and asked if they were willing to volunteer for interviews. Because students are online and not at a physical campus, all interviews took place over videoconference or phone and were recorded for transcription.

**Student advisor interviews.** Like the student interviews, the interviews with student advisors were also semistructured and guided by a set of questions. During the CBA pilot, student advisors were responsible for recruiting students to enroll in the CBA pilot and were the main contact for students if the students had questions. There was one undergraduate advisor and one graduate advisor that did the recruiting and support for phases two and three of the CBA pilot, which were the phases targeted for interviews. Both student advisors were asked if they were willing to voluntarily participate in an interview after the completion of phase three of the pilot. A researcher-developed interview protocol was followed. Student advisor interviews took place over videoconference or phone and were recorded for transcription.

**Faculty focus group.** The eight faculty members who served as faculty evaluators for phases two and three of the CBA were asked to voluntarily participate in one focus group interview after completion of phase three. A focus group was selected so

that faculty could hear and respond to the input of other faculty members as well as provide their own input. The focus group took place over videoconference, and those without video conference capabilities could still participate without video over the phone. Scheduling software (Doodle) was used to find a time that would work for all of those who agreed to participate. A researcher-developed focus group protocol was followed. The focus group proceedings were recorded and transcribed.

**Student survey.** The survey included qualitative data gathered from students through open-ended survey questions. University stakeholders developed the survey when the CBA program launched in order to gather evaluation data from the first phase of the pilot. When the decision was made to offer two more phases of the pilot, stakeholders wanted to keep the survey in place to gather the same data from all students who participated, and so the survey was sent to all students who maintained enrollment in the CBA. The survey consisted of both quantitative questions (Likert-scale) and open-ended qualitative questions and was administered to students via email utilizing SurveyMonkey. The email was sent to students in their seventh week out of eight total weeks of the CBA. The survey was administered three times, during the seventh week of each phase.

Table 2 provides a calendar showing each phase of the CBA.

Table 2

*Calendar Showing Each CBA Phase*

| Phase | CBA | Dates Students Enrolled |
|---|---|---|
| 1 | MGT300A Principles of Management | 3/7/2016-5/1/2016 |

| | | |
|---|---|---|
| 1 | HCM310A Introduction to the U.S. Healthcare System | 3/7/2016-5/1/2016 |
| 1 | HCM502 Organizational Behavior and Human Resources in Healthcare | 3/7/2016-5/1/2016 |
| 1 | ORG530 Business Ethics and Corporate Social Responsibility | 3/7/2016-5/1/2016 |
| 2 | ECN310 Microeconomic Principles | 7/11/2016-9/4/2016 |
| 2 | HCM370 Quality and Risk Management in Healthcare | 7/11/2016-9/4/2016 |
| 2 | HCM520 Managing Performance for Results | 7/11/2016-9/4/2016 |
| 2 | ORG555 Leading Diverse Teams | 7/11/2016-9/4/2016 |
| 3 | ITS315 Introduction to Networks | 9/5/2016-10/30/2016 |
| 3 | ACT410 Government and Nonprofit Accounting | 9/5/2016-10/30/2016 |
| 3 | FIN570 Insurance and Risk Management | 9/5/2016-10/30/2016 |
| 3 | PJM525 Business Analyses | 9/5/2016-10/30/2016 |

Interviews and focus groups were the best methodology to answer research questions related to finding the perceptions of students, faculty and advisors regarding the CBA program because they provided an opportunity for giving rich, detailed responses. All interviews and focus groups lasted no longer than one hour in length, and I recorded all of the interviews and focus groups and transcribed them verbatim. Once transcribed, the data was stored and organized into separate Word document files electronically. After I transcribed the data, I then coded it and created an inventory of data to prepare for analysis.

Triangulation was built into the data collection by the acquisition of data from different sources. Triangulation among different data sources can be used to potentially increase the accuracy of a study (Creswell, 2012). One method of triangulation is to corroborate evidence from different individuals (Creswell, 2012). In the CBA pilot, this method took place because three different interview sources were used as a source of data regarding perceptions of the program: students, faculty, and student advisors. Additionally, triangulation can occur with corroboration of types of data (Creswell, 2012). This occurred in the CBA pilot when students not only participated in interviews, but also completed open-ended survey questions regarding what they liked and disliked about the program and what should be improved. These multiple forms of data contributed to the overall accuracy of the findings.

Because I was the overall project manager as well as the program evaluator, I had access to all of the participants and systems needed to perform the program evaluation. Once I received IRB approval, I began requesting interviews from students, and advisors and requesting focus group participation from faculty. Participation in interviews was voluntary and I thought it was likely that not all students would volunteer to be interviewed. Most of the faculty and some advisors work virtually, so interviews and focus groups occurred over the phone and through videoconference.

My role as a researcher was intertwined with my role at the institution. Because I was chosen to project manage the implementation of the CBA pilot program, it gave me the ability to understand all of the areas of the institution that the pilot program affected. In the capacity of project manager I had some contact with the faculty in terms of training

them for their role in the CBA, and I had some contact with the student advisors as I assisted them with questions or issues that came up during the pilot. I had no contact with any of the students during the pilot project other than contacting them for interviews once the CBA was completed. My relationship with the faculty and advisors could have influenced my ability to gain interviews with them, since I had communicated with them prior to requesting interviews. Because the idea for the CBA program was developed by my immediate supervisor and provost for the institution, there could have been some potential bias on my part to ensure the pilot ran smoothly. However, the provost made it clear that he wanted an accurate picture of the pilot results, so there was no internal pressure to manipulate the results of the pilot. As someone who works in higher education, I have personal biases to serve students, and I would like to see them succeed. I have recognized this bias and have made every attempt to present data and analysis from an objective and neutral standpoint.

**Quantitative Sequence**

There were two main data collection tools that were used for the quantitative portion of the analysis: the university's learning management system (LMS) as well as a student survey that was developed by the university at the time of program development. The LMS was used to gather information regarding students' final grades (to determine pass rates), students' raw assignment scores (to determine competency achievement), and the dates that assignments were submitted (to determine the pacing of assignment submission). The data collection instruments provided the data necessary to answer different concepts in the research questions.

**Grade data from the LMS.** The student grades collected through the LMS were used to measure completion and pass rates. Completion rates were indicated by whether the student withdrew from the course (indicated by a W as a final grade) or received a letter grade (A, B, C, D, F). If a student withdrew from the course and received a W, they did not complete the course. Pass rates were determined from those who completed the course and received a letter grade. If a student received a final grade of C or higher, it was considered passing in the eyes of the university. This is because any student who receives a D or lower in a core course (a non-general education or elective course) is required to retake the course for a higher grade. The LMS was a sufficient tool to gather data regarding student grades because it housed all of the total points earned and final grades awarded to every student in every course section.

**Assignment scores from the LMS.** In order to measure competency achievement, raw scores students achieved from the major assignments were gathered from the rubrics in the LMS. The major assignments consisted of five or six critical thinking assignments and a final portfolio project. The major assignments were written specifically to ensure that students demonstrate the course competencies. It was not necessary to gather data from the smaller course assignments, as they typically support the major assignments but were not the primary indicator of competency achievement. The scores were gathered from both the CBA (e.g. MGT300A) and from the traditional online course (e.g. MGT300) in order to compare competency achievement between students in the CBA and students in the traditional online course. Because there can be many sections of some of the traditional online courses that ran during the same term as

the CBA, a random sampling of up to two sections of course data was pulled. To ensure equal probability of course section being selected, simple random sampling was used where a number was assigned to each traditional course section and a random numbers generator was used to select the course sections to be used for the sample (Creswell, 2012).

Assignment scores were aligned with four rubric criteria: Meets Expectations (ME), Approaches Expectations (AE), Below Expectations (BE), and Limited Evidence (LE). For each assignment students earned points, and based on the points they earned it was determined which rubric criterion they met. The reason why raw score data was pulled is because in the traditional online course, students can be deducted points if their assignments are handed in late, so the scores were pulled based on what the student earned prior to any late deduction in order to be a true indication of attainment of the competencies that the assignment is aligned with. The LMS was a sufficient tool to gather data regarding student assignment scores because it housed all of the points earned for every assignment in every course section. Data that was gathered regarding completion and pass rates was looked at for the entire program as well as disaggregated by degree level to see if there were differences between undergraduate and graduate students.

**Assignment submission dates.** The LMS provided the needed information to gather data on the pace in which students completed assignments because all assignments were timestamped in the LMS with the date and time of submission. The date in which students handed in their assignments was tracked in order to determine the pace in which

students completed assignments. Because the CBA program is competency-based, students completed assignments at their own pace, and stakeholders were interested in seeing whether that effected students' success. The students taking the CBA had a total of eight weeks to complete all of the assignments. There were eight modules in each CBA, and it was recommended that the students complete one module per week. University leaders were interested in knowing if students followed the recommended pacing.

**Student Survey.** The student survey utilized a Likert-type scale to measure overall student satisfaction and gather data regarding what students liked and disliked about the CBA format. There were also some non-quantitative open-ended questions on the survey, as discussed in the Qualitative Sequence area. The survey was set up on a four point Likert-type scale. A full version of the survey is provided in Appendix D. Students who were enrolled in the CBA were asked to complete the survey in the seventh week (out of a total of eight weeks) of the CBA. The survey was administered to students via email utilizing SurveyMonkey. The survey was administered three times, during the seventh week of each phase. Those students who did not complete the survey by the end of the CBA were provided an additional week to complete it after a reminder was sent. Quantitative data results from the survey were available in a table and displayed in the Data Analysis and Results section.

Table 3

*Data Collection in Each Phase*

| Phase | Courses Offered in CBA Format | Data Collected |
|---|---|---|
| 1 | MGT300<br>HCM310 | Student survey |

| | | |
|---|---|---|
| | HCM502<br>ORG530 | |
| 2 | ECN310<br>HCM370<br>HCM520<br>ORG555 | Student survey |
| 3 | ITS315<br>ACT410<br>FIN570<br>PJM525 | Student survey<br>Completion and pass rates<br>Pacing of assignment submissions<br>Achievement of competencies<br>Faculty focus group interview<br>Student interviews<br>Student advisor interviews |

## Data Analysis

Collection and analysis of both quantitative and qualitative data allowed for a well-rounded program evaluation and a better understanding of the results for the research questions. Creswell (2012) stated that a mixed methods approach is appropriate when one type of data is not sufficient enough to answer the research questions. Because the research questions for this study required the comparison of numerical data as well as focused on perceptions of individuals, both quantitative and qualitative data were needed. Additionally, the quantitative data allowed for data to be collected from every CBA participant, whereas the qualitative data, while it allowed for an in-depth exploration, was only available from a smaller number of participants who were willing to be interviewed. In order to do a comprehensive program evaluation that addresses all of the research questions, both qualitative and quantitative data were needed.

## Qualitative Data Analysis

Qualitative data was used to address research questions regarding the perceptions of the program by the students, faculty, and advisors as well as gather input about what should be improved about the program. Students, faculty, and student advisors were all asked questions regarding what they perceived to be beneficial and detrimental about the program. Even though students were asked similar questions on the student survey, an interview allowed the opportunity to probe for more detail and provided context behind their survey answers in order to gain greater insights about their perceptions. Additionally, by interviewing the faculty and student advisors, it provided an opportunity for those in direct contact with students to provide their perceptions regarding what they felt was beneficial or detrimental about the CBA program as well as what should be improved.

**Student interviews, advisor interviews, and faculty focus group interview.** The student interviews, student advisor interviews, and the faculty focus group interview occurred after the final phase of the pilot. Creswell (2012) recommended transcribing all of the interviews in order to have the most complete data set, and all of the audio recordings were converted into text documents. In order to prepare the text-based qualitative data for manual coding, formatted the documents with double-spaced paragraph spacing and left a wide right hand margin for writing codes and notes, as recommended by Saldana (2013). Saldana also recommended coding in a cyclical manner in order to refine, highlight, and focus the data. I performed at least two cycles of coding, with pre-coding occurring as the formatting and transcription process was taking place.

Saldana suggested never missing an opportunity to pre-code by highlighting or jotting down rich or significant data as it is being prepared for the formal coding process.

For the first cycle of coding I utilized structural coding. Structural coding is a type of coding that is appropriate for semistructured interview data. In the structural coding format, a phrase is applied to a segment of data related to the research question that was used to frame the interview (Saldana, 2013). This type of coding both labels and initially categorizes data at the same time. Once the structural codes were assigned in the first cycle, I performed second cycle coding to look for emerging patterns, reorganize, and reconfigure codes into broader categories (Saldana, 2013). For my second cycle coding I utilized pattern coding. Pattern coding is a form of coding that serves to pull together related codes into a smaller number of categories or themes (Saldana, 2013). From the pattern codes that emerged, I was able to perform analysis and develop statements regarding themes. Finally, I wrote up a summary of the major findings as well an interpretation of the findings.

In order to validate the data, I used a combination of member checking and triangulation. In addition to student interview data, I had both qualitative and quantitative survey data to triangulate student perceptions of the CBA program. Additionally, for the faculty focus group, student, and student advisor interviews, I relied on member checking to validate the data.

**Student survey.** There were some qualitative data that came from the open-ended survey questions on the student survey that the university developed. I formatted the survey input in a similar manner as the interview transcriptions (double-spaced with

wide right margin for assigning codes). As with the interview transcript coding, I performed structural coding for the first cycle of coding. According to Saldana (2013) open-ended questions are appropriate to code with structural coding. For the second cycle of coding, I utilized pattern coding to remain consistent in methodology with the interview coding. The questions on the survey were similar in nature to the student interview questions. However, the interviews provided more in-depth and rich feedback than the survey. The survey data was still valuable, though, because there were a greater number of survey responses than interview participants.

**Quantitative Data Analysis**

The quantitative data was collected and analyzed upon the completion of the final phase of the pilot. The quantitative data gathered from the university's LMS addressed the research questions about completion and pass rates, competency achievement, and assignment pacing. Additionally, the numerical data from the student survey provided information such as what components students liked or disliked and their overall satisfaction with the CBA format.

**Analysis of grade data for completion and pass rates.** The research question regarding the completion and pass rates was addressed by gathering quantitative grade data. To determine completion rates, the number of students who withdrew from the CBA was tracked on a spreadsheet. Coding was assigned to two variables: what CBA the student was enrolled in and what level the student is (graduate or undergraduate). The number who withdrew was divided by the total number of students to determine the percentage of students who did not complete the course. Descriptive analysis was

performed to see if there were any trends based on variables. To determine passing rates, the final grade for each of the participants, listed as a percentage, was tracked on a spreadsheet. Coding was assigned to two variables: what CBA the student was enrolled in and what level the student is (graduate or undergraduate). A grade of 70% or higher was categorized as passing. The total number of students who passed out of those who completed was calculated for analysis.

**Analysis of assignment scores for competency achievement.** The research question regarding how students compared in achieving course competencies was addressed by gathering quantitative data from assignment scores. A comparison of assignment scores between students in the CBA and students in the traditional course was completed to indicate whether there were statistically significant differences in competency achievement between the CBA students and non-CBA students. The null hypothesis was that achievement of competencies of CBA students and non-CBA students are the same. The alternative hypothesis was that achievement of competencies of CBA students and non-CBA students are different. If students perform significantly worse, then it would be an indicator that students were not benefitting from the program. The raw scores that students received on the major course assignments were taken from the LMS and then recorded on a spreadsheet. In order to compare performance between CBA students and non-CBA students, I gathered assignment scores of students who were enrolled in up to two randomly selected sections of the traditional version of the course. In other words, if there was only one or two sections of the traditional online course that ran during the same term, I used student data from all sections. However, if more than

two sections of the traditional course ran during the term, I randomly selected two sections to use. To analyze and compare competency achievement data results between students in the CBA and students in the traditional online course, I intended to perform a chi square test for goodness of fit.

The chi square test for goodness of fit was intended to be used to test the frequency counts of the numbers of students scoring on each section of the rubric. The four sections are Meets Expectations (ME), Approaches Expectations (AE), Below Expectations (BE) and Limited Evidence (LE). Because the rubric was on a nominal scale, the data consisted of the percentage of students who scored in each category of the rubric. The chi square test for goodness of fit was intended to be used to test the null hypothesis that achievement of competencies of CBA students and non-CBA students are the same at a significance level of .05. I intended on using the test to assist with the analysis of data between the observed competency scores of the CBA students to the expected, which was the scores of the students in the traditional online course. According to Triola (2012), a goodness of fit test is used to test the hypothesis that an observed frequency distribution—in this case the distribution for achievement of competencies for CBA students—fits a claimed distribution. In this case, the claimed distribution was the competency achievement levels for the non-CBA (traditional online) students. Triola also stated that the requirements for the goodness of fit test are that the data is randomly selected, the sample data consists of frequency counts in each area, and for each category the expected frequency is at least five. For my data set, I anticipated meeting all of the

requirements. Therefore, the goodness of fit test was intended to be used as an indicator to either reject or accept the null hypotheses.

**Analysis of assignment submission dates.** The research question on the pacing of assignment submission was addressed through quantitative data by looking at the percentage of students who fell more than two weeks behind in handing in their assignments. I tracked on a spreadsheet the date on which students handed in their assignments and compared it to the recommended date that students should have handed in the assignment in order to keep up with the recommended pace of the course. I calculated the percentage of students who were two weeks or more behind from week three to week seven of the course (all assignments are due at the end of week 8). As with the other quantitative data, I coded results by two variables: name of the CBA and whether the student was a graduate or undergraduate student. I analyzed the results and looked for differences among variables.

**Survey data analysis.** Quantitative data from a student survey was gathered regarding what students liked and disliked about the program and what their overall satisfaction levels with the CBA were. The survey was designed by stakeholders at the university when the program launched and utilized a Likert-type scale for students to rate whether they strongly agree, agree, disagree or strongly disagree with each survey prompt. A number was assigned to each rating (4, 3, 2, or 1) and scores were tracked on a spreadsheet. A code book was created to associate responses to two variables: the CBA the student was enrolled in and the student level (either undergraduate or graduate). This was to help identify potential trends regarding subject matter or level of student.

Descriptive statistics were used to summarize the data results for analysis. In other words, I presented the percentage of students who strongly agreed, agreed, disagreed, or strongly disagreed to each survey question. I presented the data using bar graphs as well as in numerical tables.

The qualitative and quantitative data was integrated into the results of the final program evaluation. Results were presented separately and then integrated into final conclusions and a discussion of implications. Interpretations from qualitative conclusions were either be supported by the quantitative data or contradicted the data. Implications and suggestions for future research were discussed.

## Limitations

There were several limitations of this study. One of the limitations of the study was the number of students. To be cost effective, the number of students in each CBA was limited to five, so the maximum number of students to acquire quantitative data from was 60. Because students were offered the CBA at no cost, their performance might have been lackluster since there was no financial risk involved. Additionally, in terms of participants, valid data may not have come from student interviews because those who did not have a positive experience may not have desired to participate in an interview. Therefore, a well-rounded picture from all types of students might not have appeared. Finally, as Merriam (2009) pointed out as being a risk of qualitative studies, since I was project managing the program evaluation as well as serving in the role of primary researcher, data might have been filtered through my own biases. As someone who works providing online higher education, I saw the benefits it can offer students and may have

inadvertently exclude data that is contradictory to my own views. In the project study write up I included and addressed any potential biases and made every effort to ensure validity by, as Merriam recommended, triangulating data, checking interpretations with those who are interviewed, and clarifying my researcher biases and assumptions.

Stufflebeam and Shinkfield (2007) identified an additional limitation. They stated that a limitation of the decision and accountability approach to a program evaluation is the collaboration required between the evaluator and the stakeholders, which can have the potential to bias results in an effort to serve the top decision makers. They recommended that, if those concerns are present, to potentially employ advance contractors and external metaevaluators if a program is particularly politically charged. As this was not the case for the CBA pilot, I intended on recognizing biases upfront and addressing them.

## Presentation of Analysis and Findings

Data was compiled, organized, and analyzed upon completion of the third phase of the CBA pilot program. Qualitative data was compiled from open-ended survey questions, and two cycles of coding were performed manually from the survey responses. Likewise, interviews with students, faculty, and advisors took place, were transcribed, and two cycles of coding were performed manually on the interview transcripts. Quantitative data was compiled in four areas: student grade data, student assignment scores, student assignment submission dates and student survey data. These data were collected to analyze completion and pass rates, competency achievement, the pace of student assignment submissions, and to collect student feedback on the program based on

a Likert-type scale. Data was analyzed in context of the problem, theoretical frameworks, and research questions for the program evaluation.

**Qualitative**

Qualitative data came from the open-ended survey questions and the interviews with students, student advisors, and a focus group interview with faculty members. The survey responses provided data from students from all three phases of the CBA. The student interviews provided a smaller number of volunteer students the opportunity to give more in-depth and rich feedback than the survey. Interviews also provided the researcher an opportunity to probe for more details. Additionally, the qualitative data that was collected from the faculty members and student advisors provided perspectives and in-depth feedback from different stakeholders in the CBA program. Two cycles of manual coding were performed on all of the data sets. The first cycle was structural coding, where I assigned a phrase to a segment of data which contained the main idea of the segment of data related to each question. In the second cycle of coding I utilized was pattern coding, where I pulled together the structural codes into a smaller number of themes. The same coding methodology was intentionally chosen for both the student survey responses and the interview responses so that I could more easily look at the emergence of phrases and ideas, as well as look for similar and differing categories and themes that emerged from the data.

**Student survey.** Out of the 55 total students who were sent the student survey, 45 students responded to the open-ended survey questions. Different themes arose from the answers to each question. The most frequent themes for each question are represented

in Table 4. If five or more students mentioned the theme, it was included in the table, unless there were not a minimum of five responses in any one category.

Table 4

*Themes from Each Student Survey Question*

| Open-Ended Survey Question | Most Frequent Themes (n) | |
|---|---|---|
| Other than it being offered at no cost, what are the reasons you chose to enroll in the CBA instead of taking the traditional, instructor-led course? | 1. Ability to work at own pace/flexibility (20)<br>2. No required discussion posts (8)<br>3. Opportunity to participate in a pilot (7)<br>4. No need for instructor interaction (6)<br>5. Opportunity for self-growth/challenge (6) | |
| Would you enroll in a CBA again in the future if it was available? If so, what are the reasons why? If not what are the reasons? | <u>Yes I Would</u><br>1. Liked the flexibility/ self-paced (18)<br>2. It is similar to other coursework/ similar experience and same results (6)<br>3. Prefers not having discussions (5) | <u>No I Wouldn't</u><br>1. Need to have deadlines/due dates (3)<br>2. Missed having discussions/student interaction (2)<br>3. Had frustrating/ negative faculty evaluator experience (2) |
| What prior experience and personality traits influenced your success, or lack of success, with the CBA format? | <u>Success</u><br>1. Self-driven/ independent (12)<br>2. Goal-oriented/self-motivated (11)<br>3. Previous or current professional experience (7)<br>4. Success in previous coursework (6) | <u>Lack of Success</u><br>1. Bad time management/ procrastination (4)<br>2. Workload on top of other courses (2)<br>3. CBA is more work than a *regular* course (2)<br>4. Interference of outside issues (2) |
| What are the best features of the CBA format? | 1. Flexibility/self-paced (28)<br>2. Not having discussions (10)<br>3. Having autonomy/being self-reliant (5) | |
| What are the things that you found the most difficult while taking the CBA? | 1. Lack of structure/due dates; too easy to procrastinate (12)<br>2. Having no interaction with other students(8)<br>3. Having no interaction with faculty evaluator; having little instructor feedback (8)<br>4. Nothing (6)<br>5. CBA was more work than a traditional course; | |

| | |
|---|---|
| | short answer assignments more time consuming (5)<br>6. Course design/course quality/course textbook quality (5) |
| What recommendations would you make to improve the CBA course/learning experience? | 1. Nothing (12)<br>2. Improve course design/assignment requirements/course materials (12)<br>3. Provide more structure and guidance (6)<br>4. Allow student interactions with each other (5) |

*Note*. n = number of students who mentioned the theme.

Survey findings indicate that the aspect the students found the most beneficial and liked the most about the CBA format was the flexibility and that it was self-paced. The self-pacing offered them the opportunity to hand in assignments on their own schedule. One student responded, "As a full time professional trying to balance my busy personal life, the CBA appealed to me with only one deadline for all assignments." Another aspect of the CBA format that was mentioned often was that students did not like participating in required discussions and preferred doing the short answer written assignment instead. One student wrote, "I do not like discussions as many students just paraphrase what someone else says and I have not found them to be beneficial to my learning." Another wrote, "I feel that often the discussions are a waste of time." Another common area mentioned was not having a need for an instructor. As one student stated, "I rarely engaged with my professors so I did not feel like [losing] that aspect took anything away from my learning." Finally, one reason why students wanted to participate in the CBA pilot was for the opportunity for self-growth. One student wrote "[I] wanted to challenge myself at being self-motivated." These were the most commonly mentioned qualities that students gave for why they enrolled and for what they liked best about the CBA format.

Survey responses showed that students attributed their success in the CBA format to certain personality aspects that they possessed such as being self-driven, goal-oriented, and self-motivated. When asked what personality traits influenced their success, one student responded, “I am motivated to do well as I want to get a 4.0.” Another wrote, “I just really have a strong drive to succeed both professionally and academically.” Another success factor that students cited was having professional experience in the subject matter area. One student stated, “My professional background included a leadership position so that experience helped. A lot of this was new material, but I felt I could incorporate my own experiences as well.” Internal qualities such as being goal-oriented, self-driven and independent were more commonly mentioned than having outside professional experience in the subject area.

For those students who responded that they did not like the CBA format, the majority said it was because of the self-paced aspect and their tendency to procrastinate. One student wrote, “I was challenged with time management due to no deadlines until the end of class.” Another wrote, “The lack of structure in the course allows for too much procrastination.” While many students did not miss doing required discussion posts, some stated that they missed interacting with other students. One student wrote, “I do kind of miss talking with students.” Another wrote, “[I] missed not knowing who was in the course and being able to connect with other students.” The qualitative survey results underscore the importance of enrolling students who are the right fit for the program.

In order to address the problem of this study, university leaders need information in order to determine how to improve and expand the program. Students were therefore

asked on the survey what they would improve about the program. The most common answer was to improve nothing, followed by improvement of the course materials or design, which indicates a similar issue would be in the parent, traditional course also. Improvements to the courses that students recommended included lessening the number of required and current references in assignments, changing the required textbooks, fixing broken links in course content, providing better clarification on assignment instructions, and ensuring assignments are aligned with the required readings and content for the week. The next most common suggestion that students mentioned were to provide more structure and guidance such as a midterm goal or deadline. These improvements can be considered by university leaders prior to program expansion.

**Student interviews.** Emails were sent to a group of 35 students to request voluntary interviews along with the consent form. All students from phase two and three were emailed, unless they had withdrawn from the CBA, in which case they were not emailed. Eight students stated their consent to be interviewed and provided a telephone number and time when they were available to be interviewed. There were four undergraduate students and four graduate students who were interviewed. Five were female and three were male. Seven out of eight of them had passed the CBA and one did not pass. All interviews took place over the phone. At the time that was agreed to, I called each of the students and performed a semistructured interview using the interview protocol provided in Appendix C. Even though one of the students did not pass, I did not utilize the additional questions on the protocol for students that did not pass because the student had already indicated the reasons she did not do the work in her previous answers

to the questions, so asking the additional questions would have been redundant. During the course of all interviews, I probed for more detail. All phone calls were digitally recorded and transcribed shortly after each interview. Memberchecking took place following the interviews, and a summary of the interview analysis and findings were shared with interviewees for comment and validation.

In the first interview question, I asked students what their impressions were of the CBA program when they were initially contacted about participating. Most participants commented that they were excited or intrigued to try it. One student stated, "I was really intrigued by this format and what it would be like not having a faculty member." Another student said he had a favorable impression because he did not think it would be that much different from his experience in a regular course. Only one respondent said she was unsure about taking the CBA because she thought she would want to have an instructor helping facilitate. She added, "I wasn't quite sure about it, but I decided to just give it a shot." She also mentioned that, because the CBA was free, it allowed her to take a chance on doing it without a lot of risk on her part, which helped make her decision.

For the next two interview questions, I asked students what they liked and disliked about the CBA format. Many students said they liked the flexibility of the format. One student stated, "What I really liked was the ability to work through at my own pace." Another student said, "A normal online class that has deadlines and due dates and discussions and all of that, that sometimes doesn't work for me . . . because it seemed like when things were due, things were crazy for me at work. I was really excited about having more flexibility." Just as many responded that they liked not having to post in the

discussion forum. One woman stated, “I tend to do things early, so having to wait for everyone to respond in a normal class sometimes has a downside. I just liked not having to wait for everyone else’s response before I could finish my week out.”

As for what students didn’t like, a few students said they couldn’t think of anything they didn’t like. A few other students brought up the course quality. For example, one student mentioned that it was really hard to find information; another said there were some links that were broken within the CBA, and another student said that the course content wasn’t updated. He said, “There was more relevant data or research in that field that could have been utilized for that course.” A couple of students mentioned not liking things about the faculty evaluator for the CBA. Students mentioned that they needed more faculty feedback on their assignments or that it was difficult to meet the faculty evaluator’s expectations. Finally, a couple of them stated that they wanted more student interaction. “I kind of miss the discussion forums. I miss that interaction from the other students,” said one. Some of the dislikes, such as course quality, inadequate instructor feedback, and difficulties with grading expectations are not necessarily due to the CBA format. The CBA course content is identical to the traditional course, and instructors were asked to provide the same level and quality of feedback as well as have the same quality expectations as they would have in a traditional course. These responses may be indicative of larger issues that exist beyond the CBA format.

The next question I asked was how the students would describe the experience of being in a CBA compared to a traditional course. This question was meant to get students to think about the overall experience as it compared to being in a traditional online

course. There were no common answers to this question. Students mentioned that a CBA really wasn't all that different than the experience being in a traditional course other than it did not have deadlines and did not have required discussion posts. One student mentioned that it was different not having an instructor who was actively engaged in the course, but that it didn't make a difference to her. She stated, "It was different because there was someone listed as the instructor, but they weren't available like the traditional instructors are for the traditional courses. That wasn't an issue for me, if that makes sense." When I probed as to whether the students missed anything from the experience of being in a traditional course, two stated that they missed the interaction with students. One stated, "I really like getting the input and the experience from others in the class. How do they do things? When they had this situation, how did they react? What process did they use? That part you couldn't get without the discussion forum." It is worth noting that this particular student was the only one who said he would not do the CBA again unless he needed a flexible format because he missed the interaction with other students.

For the next question, the students were asked what they were aware of after completing the CBA that they were not aware of when they enrolled. The intent of this question was to provide university leaders with information about how well the program was explained to students when they were asked if they were interested in enrolling in the pilot. Most students answered that nothing really surprised them, that the program was explained to them well, and that they knew what they were getting into. One student said she had pretty lengthy conversations with her advisor before enrolling. She stated, "It probably drove her crazy, but she answered everything. I really felt comfortable saying,

'OK, yeah. I want to do it.'" One student mentioned that he was not clear on the expectations for the short answer assignments going in, but after receiving feedback on his first one, he knew how to do those moving forward.

The next two questions centered on student motivation and self-regulation. They focused on how students perceived themselves in order to help university leaders to determine the most appropriate audience for the CBA program in terms of student fit. When students were asked about how they saw their ability to self-regulate their behavior, several mentioned their ability to stay on track, set goals, work ahead, and manage time to stay on schedule. One stated, "My goal is to have my CBA [weekly coursework] done by Saturday. I set up a rigid schedule." Only one student described herself as a procrastinator, and that particular student did not pass the CBA. She stated, "I'm a procrastinator. I will readily admit that." She also was able to recognize what qualities were needed to be successful in the CBA: "You really have to build your own schedule and maintain it and be organized or else you will fall behind." When students were asked specifically what motivated them to complete their work in the absence of deadlines, there were similar responses such as being goal focused, setting their own self-created deadlines and schedule, and having high personal standards and a desire for success. Two students mentioned having a free course as a motivational factor as well.

Students were asked in the next question to identify whether their work or previous experience influenced their performance in the CBA. Knowing that a competency-based approach would benefit students with prior knowledge in the subject area because they could more easily demonstrate prior knowledge, university leaders

were interested in knowing how much of a factor prior experience was to student success. Only one student in the technical course said that she was at a "major disadvantage because," she explained, "then you don't really have anyone to run those ideas off of first." A student who was in the same technical course said that his experience was one of the reasons he agreed to be in the course. He said, "Almost everything that was in the course I do on a daily basis or have done in the past. That was a big factor." While experience seemed to be a success factor in a technical course, students from other types of courses did not feel that experience was necessary to be successful. Those with a background said that it made the coursework easier to complete. However, even if students did not have a background, the general feeling was that one could succeed as long as they had the desire to do so. One student said, "Background didn't really matter. I desire to succeed. There's no option for mediocrity or failure." Another student said it wasn't having a background in the content that drove her success; rather, it was her work experience as a healthcare director that gave her the skills to meet deadlines and be highly productive, which she found more important than content knowledge.

The last two questions asked students what should be improved in the program and whether they would do the program again. A few students said that they could not think of anything to improve and that they really liked the format. Two students recommended having an instructor available to reach out to for questions. One student said, "If I had a question on an assignment, I didn't know who to send them to because I didn't know who the instructor was." Two other students mentioned improving the course content either because it was outdated or because the assignment instructions were

not clear. The one student who identified as a procrastinator recommended having a midterm deadline as well as one at the end. “I think that would be a good way to force people to get things done in time so that they don’t get backlogged.” Even with all of the improvement recommendations, all of the student interviewees said that they would participate in the CBA again. Cost and flexibility were mentioned as the reasons why they would do it again. Two students who were in the technical courses qualified their future participation based on whether they had a comfort level with the subject matter, and one student said he would only take a CBA again if he were in a situation where he needed a flexible course based on his work and life schedule because he missed the discussion forum and the interaction with other students.

**Advisor interviews.** There were two student advisors who were a part of phase two and three of the program implementation, and both of them stated their consent to participate in separate interviews. Both interviews took place over the phone. One of the advisors was an undergraduate student advisor, and one was a graduate student advisor. For both interviews, I called each of the advisors and performed a semistructured interview using the interview protocol provided in Appendix C. During the course of the interviews, I probed for more detail during the interview process. All phone calls were digitally recorded and transcribed shortly after each interview. Memberchecking took place following the interviews, and a summary of the interview analysis and findings were shared with interviewees for comment and validation.

In the first interview question, I asked the advisors whether the CBA format seemed like a good idea when it was explained to them. One advisor said she did think it

was a good idea because she has had students ask her in the past about whether CSU-Global offered any other more flexible options. She said, “I think that’s a plus for our students, to have a different option instead of just every eight weeks, turn in your assignments every week.” The other advisor also thought it was a good idea, and that it made sense to offer it as an option for students.

The second and third interview questions focused on finding students to enroll in the CBAs. I first asked whether the advisors thought students were recruited appropriately. The intent of this question was to see whether the university was targeting the right students for the CBA format. Both advisors mentioned that they were provided a list of students that were eligible to be enrolled, and it was left to their discretion about who to contact based on their knowledge of the students. On their own, the advisors were responsible for enrolling five students into each CBA. They both tried to target students who were in good standing and had completed previous coursework successfully. One advisor mentioned also trying to find students who were not on financial aid because she felt they might be more motivated to participate in a free class. In the next question, I asked whether the advisors had difficulty finding students to enroll in the CBA. One advisor said that there appeared to be more interest in some courses more than others. Both advisors mentioned that some students did not want to try it because they knew they needed the structure or they knew they wanted to take it as a traditional class with other students and more support.

When asked whether the CBA program benefitted students, both advisors felt that it did, but only for certain kinds of students. One stated, “The students that are good

students, that are self-motivated and organized, this is huge for them because they can take care of their family, their work, their personal lives, and get their stuff done when they have time . . . I think it's a plus." The other advisor agreed that for some students it is a wonderful opportunity. She also said that she thought it was a good opportunity, as long as students have experience in the same area as the class. She said, "It saves them so much time of having to go through all of that, and instead just getting credit and just using their knowledge. She then added, "But I think that for students that don't have any background, I don't think it's beneficial." She felt that students are more likely to not complete the CBA without prior knowledge or experience. She also stated that students without experience may not learn the material to the extent they would have in a regular course. She said that if a student does not already have background, then it is not beneficial.

The next question that I asked the advisors was whether there was anything detrimental or difficult for the students about the CBA format. One advisor said that some students told her they wanted to have some interaction with other students. She recommended putting up some kind of forum where students could interact with each other. "It's building those bonds with students, between them. I do think they were missing that component." The other advisor felt that some students struggled because they needed a point of contact for assignment and course content questions. She said that students needed more help when they had course-related questions, and that she as an advisor was not able to answer those kinds of questions. She recommended having more instructor –level support for students.

The next question centered on the student support that the advisors provided and whether the advisors felt it was effective. The original thinking behind this question was that the advisors would need to take a bigger role in supporting the students because there were no instructors facilitating the course and students may have needed to rely on them more for assistance. One advisor mentioned that the thing she found effective was establishing a relationship with students. She said, "I think that being effective is just having that open line of communication and by establishing that relationship with them so that the student knows they can come to you if they are falling behind." She mentioned that adult learners do not always want to admit they are getting behind, so she was constantly checking in with them to see how they were doing. She also mentioned that the students were fairly well motivated, and that was a factor to their success. The other advisor also mentioned that the students were motivated, which resulted in less interaction with them on her part. She said, "These students were the high GPA students, the ones that can self-motivate, the ones that are organized. Those are the people that we don't hear from very often."

For the next question, I asked the advisors why they thought students fell behind or didn't submit their coursework. Both advisors mentioned that there could be a multitude of reasons for why students got behind because there are so many life circumstances that can get in the way of completing courses. "Life happens and sometimes people get promotions, sometimes there's family emergencies . . . and that happens all the time with our students regardless of if it's a pilot class or a regular class," one advisor said. The other advisor commented, "I think that sometimes we just stretch

ourselves too thin, and it sounded like a wonderful opportunity, especially if there are limited seats." She also mentioned that, because the students didn't have to pay for the CBA, that some may have been less motivated to finish. Additionally, she said if any student happened to be a procrastinator, they may have had a tendency to wait too long thinking that they could catch up, and they probably got overwhelmed.

I next asked what kind of feedback the advisors remembered getting from students regarding the CBAs. The graduate advisor said the main feedback was that students really liked it and some let her know that they wanted to do it again in the future if more CBAs became available. The undergraduate advisor said that those students who were successful were grateful for the opportunity and really liked it. She also heard feedback that the short answer assignments were more work than the students had anticipated and that some of the assignment instructions were a bit vague.

Finally, when asked about what the advisors felt should be improved about the program, one advisor reiterated her recommendation that students have prior experience. She also said the university could consider allowing students the ability to interact with each other because some of the students missed having that interaction. Another of her recommendations was to provide students who are considering enrolling in a CBA with a really clear outline of the expectations so that they know what they are getting into. She did not recommend allowing students a longer timeframe to finish the CBA because the university uses and open timeframe model for other alternative credit options and sometimes students get lost and forget to complete them. The other advisor mentioned improvements such as making sure we recruit students appropriately, making sure

students have completed at least two courses successfully and having student support available when students have course or content-related questions.

**Faculty focus group interview.** There were eight faculty members who served as faculty evaluators for the CBAs in phase two and three of the program implementation. Four faculty members stated their consent and were scheduled to participate in a focus group interview. Two faculty members taught undergraduate CBAs: ECN310 Microeconomic Principles and ACT410 Government and Nonprofit Accounting. The other two faculty members taught graduate-level CBAs: ORG555 Leading Diverse Teams and FIN570 Insurance and Risk Management. The focus group was scheduled as a videoconference call, although no faculty members used the video function, which required a webcamera, and so the focus group took place with audio only. At the agreed upon time, all members called in or used a weblink to join, and I performed a semistructured interview using the interview protocol provided in Appendix C. One participant was not there at the beginning of the call but arrived to the call approximately halfway through. When the questions were completed, the late member stayed on and provided some individual responses to questions. During the course of the focus group, I probed for more detail during the questioning process. The focus group was digitally recorded and transcribed shortly following the completion of the focus group. Memberchecking took place following the focus group, and a summary of the focus group analysis and findings were shared with interviewees for comment and validation.

The first question I asked the faculty members was whether the CBA format benefitted students. One faculty member expressed reservations about whether the

students attained the competencies and was surprised that the CBA was not structured any differently that the traditional course. Even though all of the students in his CBA passed, he stated he would have liked to have had students complete an objective test to ensure students had obtained the course competencies. Another faculty member said that students benefitted and obtained the competencies and noted, "They overdid it on everything. Their products and their papers and their assessments for the students I had were just outstanding." Another faculty member said he thought the idea was a good one in theory, and he was surprised that his students did not do very well and were not consistent about getting their assignments in. The last faculty member expressed concerns about course quality and how little time and effort a student could put into the course and still receive an A. He thought the CBA should be more rigorous and that students should be held to higher expectations to receive an A. He also stated that he would like to have seen students demonstrate competencies through the use of testing.

When faculty were asked what the best features of the CBA were, one faculty member stated that it wasn't all that different other than having the short answer questions for the CBA instead of the discussion forum. The same faculty member expressed concerns about having "assignment dumps" at the end of class due to the lack of deadlines and the potential for students to wait until the end of the course to hand everything in. Another faculty member agreed with the concern that students would hand things in at the end and said there might be a potential for instructor complaints about the CBA format due to that. A third faculty member felt that it was good for students not to have deadlines. He stated, "All he has to do, all she has to do, is to demonstrate they are

competent in the subject matter and it doesn't matter whether they have demonstrated [competencies] in the first week or in the seventh week or in the eighth week." That faculty member felt the flexible format was a good benefit to students.

In the next question, the faculty members were asked what they felt was potentially detrimental for students. The answers centered on the concept that students may someday complete their entire program of study or the majority of courses in their program through in the CBA format. One faculty member stated, other than the inability to do group work, "I don't think I would see any negatives if someone basically did their whole program in this way." He added that the only thing that the students would miss out on was the discussion board, but from his perspective, "I don't think that's a big loss." He also mentioned the potential loss of having students recognize the importance of the life skill of handing in weekly assignments by a deadline, since there was only one dead line at the end of the CBA, but he also added, "I don't know that that's a huge deal." Another faculty member reiterated that, because the format of the traditional course is so similar to the CBA, that there wasn't anything detrimental. He said, "I think that this format works better for the students because they don't feel the pressure of handing things in on time." He felt that it was good for students not to be penalized for handing in late work.

In the third question I asked the faculty members what they found to be the most difficult thing about being a faculty evaluator. One of the faculty members had previously mentioned wanting to reach out to students, as was his normal practice with a new group of students. He said that he got used to the lack of communication and interaction, but

also added that students may miss the personal interaction, and, he added, "I need that moment a lot of times with the student as well . . . a feeling or an instructor punch or whatever." Another faculty member said he did not find anything difficult regarding the CBA format specifically, but he did have concerns about the course content and discussion board questions not changing from one term to another. He said that he has noticed similar answers circulating among students and recommended making the content more secure or changing it more often to discourage cheating. A third faculty agreed that students circulating the same work can be a problem, although he has not noticed that the problem is too widespread with his courses. He also mentioned that he did not find anything to be particularly difficult or challenging about being a faculty evaluator for a CBA.

Because the format of the CBA is focused on students achieving competencies, the next question asked the faculty how well the faculty felt that the students achieved the learning outcomes in the course. All faculty members agreed that students demonstrated competencies at the same level. One said, "For the students that actually did their work I thought it was generally comparable to what other students do." Another stated, "I didn't see any noticeable difference at all. In fact, perhaps on a margin they did better than the students in the regular format."

The fifth question I asked was regarding whether the faculty thought that students had the prerequisite knowledge or skills to be successful, particularly in terms of whether the right kind of student was enrolled in the pilot. One faculty member suggested having criteria to find the students that are the best fit for the program. He stated, "I personally

don't think this is for everybody . . . I do think there needs to be some criteria of demonstrated success." The faculty discussed some of the merits of potentially screening the students based on things such as GPA or on whether they consistently handed in assignments early in previous coursework. Another faculty member said that he didn't think students should be screened, but they should be educated about what they are getting into and what the expectations are. After that, he recommended, "You should let the student decide whether this is something that will work for them or whether they have the necessary background through work experience to demonstrate the competency." Another faculty agreed and said the university could also consider a screening for work experience.

When asked what could be improved about the CBA, a variety of different answers surfaced. The group briefly discussed the idea of having more student interaction, which the faculty were open to as long as they did not need to moderate or evaluate it. "Don't make me monitor a free form discussion," said one. But they did not see any harm in having an open chat area or an area for introductions. One faculty member questioned the possibility of abandoning the semester term structure and instead allowing students to start and finish at their own pace. Another faculty agreed with that idea and said students should be able to accelerate the rate at which they learn or complete courses as they wish. This idea was agreed to by all faculty members.

The last question asked whether the faculty members would accept another faculty evaluator assignment. One faculty member said that he would accept another assignment if the university wanted him to, but he has concerns about the course quality

and how little time and effort the students put in and still expect an A. He said, "The students in the class I was teaching would put in a half page to a page paper full of errors that, quite honestly, if you handed in in the industry the boss would be telling you was unacceptable. And this concerns me--the entitlement." The other three faculty member said they would definitely accept another CBA assignment, although one faculty member added that the payment to be a faculty evaluator should probably mirror what they get paid for in a traditional course because the workload was similar. Another faculty member said he thought it was good for both the students and the instructor not to have looming deadlines. Another benefit mentioned was that the CBA model was a good way for the university to stay marketable and offer students options.

**Qualitative conclusions.** Overall, the stakeholder groups of students, advisors, and faculty felt that the CBA model was worth pursuing and expanding, and that it could benefit certain kinds of students. However, there were some components that stakeholders had concerns about, and there were differing opinions about what could be improved. In both the student survey and the interviews, what students said they liked the most about the CBA format was the flexibility that the CBA offered, although there was recognition that the self-paced format could work against a student who was not self-driven or well-organized. Faculty members also thought the flexibility was a good aspect of the CBA, although, because the CBA was self-paced, some faculty were concerned about having "assignment dumps" at the end of the CBA where students would wait until the end to hand everything in. Although it didn't happen much during the implementation of the pilot, there was concern that it could happen more should the program be

expanded. Not all students liked the self-paced format where there was only one fin al deadline at the end, and some student survey responses indicated they recommended having more structure and interim deadlines. This was also recommended during the student interviews by the student who did not pass the CBA. She recommended having an interim deadline instead of one final deadline to help with her procrastination tendencies.

When discussing potential improvements for the CBA, some faculty suggested having even more flexibility and extending the timeframe past the eight weeks—essentially leaving the CBA open until all assignments were handed in. This would be a true competency-based model where students can complete competencies at their own pace and are awarded credit once they demonstrate all of the competencies. However, none of the students recommended allowing for more time, and some appreciated having the same eight-week timeframe as the traditional courses because they knew the pace they needed to follow in order not to get behind with their coursework. Along a similar vein, one advisor mentioned that it may be detrimental to leave the CBA open until it was completed because she thought students may forget to do it or would not be motivated to complete it without some kind of deadline. In sum, even though qualitative data revealed that overall stakeholders felt the model was worth pursuing and expanding, the interview and survey data provided stakeholder perceptions that can serve to drive improvements to the CBA format in the future.

The qualitative conclusions support the theoretical frameworks for the study. One reason why students, faculty, and advisors agreed that the model was worth pursuing

overall was because there was recognition that adults are self-directed and motivated, as adult learning theory has stated. There was also recognition among students, faculty, and advisors that adult learners are capable of being self-directed, goal driven, and possess self-efficacy at varying levels, which is in alignment with Bandura's social learning constructs. There was recognition among the interviewed stakeholders that the self-paced format would not work well for someone who was not self-driven. While Bandura recognized self-direction as a component of social learning theory, it appears from the interviews that if the supporting skills of organization, time-management, and occasionally prerequisite content knowledge are not present, the student may not do well in the CBA. As long as adult learners in the CBA remain motivated and can self-regulate their behaviors to meet their goals, the qualitative data suggests that the CBA can be a good format for students. However, if students are unmotivated, tend to procrastinate, or unable to learn the material on their own, some students will struggle.

**Quantitative**

There are several data sets that make up the quantitative data for the program evaluation. Each set of data was collected to address different research questions for the program evaluation. Quantitative data mainly came from the university's LMS, which provided student grade data, competency scores on student assignments, and the dates that assignments were submitted. The raw data in Excel is available upon request from the researcher. Findings from the LMS data provided answers to research questions regarding completion and pass rates, the pace of assignment submissions, and how well students attained competencies in comparison to students in the traditional version of the

course. Additionally, quantitative survey data indicated student Likert-scaled ratings on different aspects of the CBA program. Quantitative survey findings support the qualitative data in regards to students' likes and dislikes about the CBA program. The quantitative data will help provide university leaders information that can help them draw conclusions about how to improve the program.

**Analysis of grade data for completion and pass rates.** Student grade data was collected in order to analyze completion and pass rates for students who enrolled in the CBA program. To determine completion rates, withdrawal rates were recorded to track how many students completed the CBA after they enrolled. Then the percentage of students who did not complete each CBA was determined. Table 5 indicates the completion rate results and shows the percentage of students who did not withdraw from each CBA. Overall findings show that 83% of students who were enrolled in the CBA did not withdraw. The data also indicates that undergraduate students completed at a higher rate than the graduate students. However, this data set was influenced by the fact that, for the CBA pilot, the university allowed students to withdraw after the deadline to drop the course. Because the students did not pay for the CBA, there may have been a higher tendency for students to withdraw if they got behind in their work.

Table 5

*Completion Rates Indicating Students Who Did Not Withdraw*

| | Withdrew | Completed | Total (n) | % Completed |
|---|---|---|---|---|
| MGT300A | 2 | 4 | 6 | 67% |
| HCM310A | 0 | 4 | 4 | 100% |
| ECN310A | 1 | 4 | 5 | 80% |

| | | | | |
|---|---|---|---|---|
| HCM370A | 1 | 4 | 5 | 80% |
| ITS315A | 0 | 5 | 5 | 100% |
| ACT410A | 0 | 5 | 5 | 100% |
| **Undergraduate** | **4** | **26** | **30** | **87%** |
| HCM502A | 2 | 3 | 5 | 60% |
| ORG530A | 0 | 5 | 5 | 100% |
| ORG555A | 2 | 3 | 5 | 60% |
| HCM520A | 1 | 4 | 5 | 80% |
| FIN570A | 1 | 4 | 5 | 80% |
| PJM525A | 0 | 5 | 5 | 100% |
| **Graduate** | **6** | **24** | **30** | **80%** |
| **Total** | **10** | **50** | **60** | **83%** |

Passing rates for the CBA pilot program were determined by the total number of students who passed the CBA with a 70% or higher out of those who enrolled. Table 6 indicates the passing rate results. The results show that the overall passing rate was at 60%. Both undergraduate and graduate students passed at the same rates, suggesting that the CBA model may be no better for one level of student over the other. There were no clear patterns among the CBA regarding the type of CBA where students did or did not perform well. For example, even though the undergraduate accounting (ACT410) and graduate-level project management courses (PJM525) had the highest passing rates, because their subject matter is dissimilar, and the numbers enrolled into each CBA so low, no clear conclusions can be drawn without more data. Additionally, one graduate CBA in the area of healthcare, HCM502, had the lowest passing rate (20%), but another graduate-level CBA in healthcare, HCM520, had a much higher level of passing rate

(80%). This suggests again that the low numbers of students who were enrolled can greatly affect passing percentages and that more data is needed before clearer conclusions can be drawn.

Table 6

*Passing Rates Indicating Students Who Passed with a Grade of 70% or Higher*

| | Did Not Pass | Passed | Total (n) | % passed |
|---|---|---|---|---|
| MGT300A | 3 | 3 | 6 | 50% |
| HCM310A | 2 | 2 | 4 | 50% |
| ECN310A | 2 | 3 | 5 | 60% |
| HCM370A | 3 | 2 | 5 | 40% |
| ITS315A | 2 | 3 | 5 | 60% |
| ACT410A | 0 | 5 | 5 | 100% |
| **Undergraduate** | **12** | **18** | **30** | **60%** |
| HCM502A | 4 | 1 | 5 | 20% |
| ORG530A | 2 | 3 | 5 | 60% |
| ORG555A | 2 | 3 | 5 | 60% |
| HCM520A | 1 | 4 | 5 | 80% |
| FIN570A | 3 | 2 | 5 | 40% |
| PJM525A | 0 | 5 | 5 | 100% |
| **Graduate** | **12** | **18** | **30** | **60%** |
| **Total** | **24** | **36** | **60** | **60%** |

*Note.* Numbers in the *Did Not Pass* column include withdrawals.

**Analysis of assignment scores for competency achievement**. In order to measure and compare competency achievement between students in the traditional online course and students in the CBA, the raw scores students achieved on the major assignments were gathered from the assignment rubrics in the LMS and categorized into four areas: meets expectations (ME), approaches expectations (AE), below expectations

(BE) and limited evidence (LE). Any student who handed in at least one assignment was included in the data set, but if student did not hand in any assignments, they were excluded on the premise that that competency cannot be determined if no course assignments were ever attempted.

The null hypotheses of the research question associated with competency achievement data was that achievement of competencies of CBA students and non-CBA students are the same. The original intent was to test this hypothesis using the chi square test for goodness-of-fit, which would have indicated if there were statistical differences between the CBA and non-CBA students. However, one of the requirements of the goodness-of-fit test is to have an expected frequency count of at least five students in each category (Triola, 2012). This requirement was not met. For example, as seen in Table 7, the expected count of the CBA students in the AE category was only four; therefore, the chi square goodness-of-fit test could not be used. However, conclusions can be drawn based purely on averages in each category of the students in the traditional course and the students in the CBA.

Table 7

*Expected Frequency Count*

| | ME | AE | BE | LE |
|---|---|---|---|---|
| Traditional online course student count (284) | 241 | 24 | 3 | 16 |
| Traditional online student count percentage in each category | 84.9% | 8.5% | 1.0% | 5.6% |
| **Expected frequency count of CBA students (45)** | **38** | **4** | **.5** | **2.5** |

Findings from the competency achievement data are presented in Table 8 and indicate that students in the traditional online course on average perform better than

students in the CBA. A total of 85% of traditional students met expectations on competencies, and a total of 78% of students in the CBA met expectations on competencies. There is also a much higher percentage of CBA students in the "limited evidence" category (18%) compared to the traditional course (6%). However, this may be due to the larger number of students who stopped submitting assignments after falling behind in the CBA. Generally, those students who handed in their assignments in the CBAs attained the competency, while those that fell behind didn't attempt the competency at all (as opposed to attempting and doing poorly on the competency). This data is supported in the completion and pass rate data. Out of the 50 students who did not withdraw from the CBA, 45 of them handed in at least one assignment and were included in the competency data, however, many of them stopped submitting assignments and did not end up passing. This could indicate that students simply got behind and overwhelmed rather than that they did not have the ability to demonstrate competencies. Because the CBA was offered at no charge to the student, there were not any repercussions to the student for falling behind, other than receiving a bad grade (and the university removed failing grades from their records, although the students did not know this at the time). Based on the averages in each category of the students in the traditional course and the students in the CBA, it appears that competency achievement is not the same between the two groups and the null hypothesis is rejected.

Table 8

*Competency Achievement Data*

| Traditional Online Course | Total (n) | ME | AE | BE | LE |
|---|---|---|---|---|---|
| MGT300 | 39 | 33 | 2 | 0 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| HCM310 | 26 | 22 | 3 | 0 | 1 |
| ECN310 | 13 | 11 | 2 | 0 | 0 |
| HCM370 | 21 | 16 | 5 | 0 | 0 |
| ITS315 | 24 | 18 | 1 | 1 | 4 |
| ACT410 | 35 | 32 | 1 | 0 | 2 |
| HCM502 | 25 | 23 | 1 | 0 | 1 |
| ORG530 | 25 | 23 | 2 | 0 | 0 |
| ORG555 | 30 | 27 | 2 | 0 | 1 |
| HCM520 | 27 | 21 | 4 | 1 | 1 |
| FIN570 | 9 | 5 | 1 | 1 | 2 |
| PJM525 | 10 | 10 | 0 | 0 | 0 |
| **Total Traditional Online Course** | **284** | **241** | **24** | **3** | **16** |
| **% Traditional Online Course** | **100%** | **85%** | **8%** | **1%** | **6%** |
| CBA | | | | | |
| MGT300A | 3 | 3 | 0 | 0 | 0 |
| HCM310A | 3 | 2 | 0 | 0 | 1 |
| ECN310A | 3 | 2 | 1 | 0 | 0 |
| HCM370A | 3 | 2 | 0 | 1 | 0 |
| ITS315A | 5 | 3 | 0 | 0 | 2 |
| ACT410A | 5 | 5 | 0 | 0 | 0 |
| HCM502A | 3 | 1 | 0 | 0 | 2 |
| ORG530A | 5 | 3 | 0 | 0 | 2 |
| ORG555A | 3 | 3 | 0 | 0 | 0 |
| HCM520A | 4 | 4 | 0 | 0 | 0 |
| FIN570A | 3 | 2 | 0 | 0 | 1 |
| PJM525A | 5 | 5 | 0 | 0 | 0 |
| **Total CBA** | **45** | **35** | **1** | **1** | **8** |
| **% CBA** | **100%** | **78%** | **2%** | **2%** | **18%** |

*Note.* Total (n) includes students who handed in at least one assignment and does not includes students who did not attempt any assignments.

**Analysis of assignment submission dates.** Data regarding the pace of assignment submissions is included in Table 8. This data indicates the number and percentage of students who handed in the majority of their assignments over two weeks late. When the CBA pilot program launched, university stakeholders wanted to know if

students would fall behind due to the lack of weekly deadlines. Additionally, faculty members were initially concerned that in a self-paced environment the students would wait until the end of the CBA to hand in all of their work. However, the data shows that only 32% of students who completed the CBA handed in the majority of assignments over two weeks late. The data also suggests that graduate students hand in assignments in a timelier manner than undergraduate students, which could indicate that more mature students are better at managing time and workload. However, in two graduate courses (ORG530 and FIN570) the majority of students were behind as opposed to only one undergraduate course (HCM370). The three worst performing courses were in different disciplines and within disciplines there is wide disparity, as seen in the three healthcare courses (HCM370 at 75%, HCM502 at 33% and HCM520 at 0% of students handing in the majority of assignment over two weeks late). This data may alleviate faculty concerns that students will fall behind and then hand in everything at the end of the CBA. The data indicates that most students who fall behind do not end up passing.

Table 9

*Pace of Assignment Submissions*

| | N of Students Who Handed in Majority of Assignments Over 2 Weeks Late | Total (n) of Students | Percentage of Students Who Handed in Majority of Assignments Over 2 Weeks Late |
|---|---|---|---|
| **Undergraduate** | | | |
| MGT300 | 1 | 4 | 25% |
| HCM310 | 2 | 4 | 50% |
| ECN310 | 1 | 4 | 25% |
| HCM370 | 3 | 4 | 75% |
| ITS315 | 2 | 5 | 40% |
| ACT410 | 0 | 5 | 0% |

| | | | |
|---|---|---|---|
| **Graduate** | | | |
| HCM502 | 1 | 3 | 33% |
| ORG530 | 3 | 5 | 60% |
| ORG555 | 0 | 3 | 0% |
| HCM520 | 0 | 4 | 0% |
| FIN570 | 3 | 4 | 75% |
| PJM525 | 0 | 5 | 0% |
| **Total** | **16** | **50** | **32%** |

*Note.* Data in the *Total (n) of students* column does not include students who withdrew.

**Survey data analysis.** 55 students were sent the CBA survey and 45 of them (82%) responded to the majority of the questions. A summary of the data appears in Table 10. The quantitative survey data supports the qualitative data regarding what students liked about the CBA. 87% indicated that they liked the self-paced format and 69% indicated that they preferred submitting short writing assignments instead of participating in discussions. Only 49% of the students indicated that they had professional experience in the same subject matter area as the CBA, possibly indicating that professional experience can be helpful but not a determining factor to successfully passing the CBA. It could also indicate the self-regulation and self-motivation were more important factors to student success than a professional background in the area of the CBA. Responses also indicate that the CBA participants saw themselves as good students with good APA skills. The survey data shown in Table 10 reveals that students perceived themselves as being able to succeed in the academic environment. It is also worth noting that even though 82% of students indicated they agreed they had achieved the course outcomes, the data may be mainly from students who were successful in the CBA. Students who were not successful were less likely to complete the survey.

Table 10

*Student Survey Response Results*

| **Survey Question** | Strongly Agree | Agree | **% Agree or Strongly Agree** | Disagree | Strongly Disagree | **% Disagree or Strongly Disagree** | Response Count |
|---|---|---|---|---|---|---|---|
| I like the self-paced model of the CBA. | 28 | 11 | **87%** | 5 | 1 | **13%** | 45 |
| I prefer submitting short writing assignments instead of having weekly discussions. | 13 | 18 | **69%** | 5 | 9 | **31%** | 45 |
| I have prior work experience with the same subject matter as the CBA. | 7 | 15 | **49%** | 14 | 9 | **51%** | 45 |
| I have good APA citation skills. | 12 | 29 | **91%** | 3 | 1 | **9%** | 45 |
| I would pay $395 to take another CBA if it were available. | 23 | 13 | **80%** | 6 | 3 | **20%** | 45 |
| I would describe myself as a good student with a B or above average. | 35 | 9 | **98%** | 1 | 0 | **2%** | 45 |
| I found the CBA content to be academically challenging. | 20 | 23 | **96%** | 2 | 0 | **4%** | 45 |
| I accomplished the course learning outcomes. | 22 | 14 | **82%** | 4 | 4 | **18%** | 44 |
| This CBA contains relevant materials to support my learning. | 23 | 18 | **93%** | 3 | 0 | **7%** | 44 |
| The required reading materials in the CBA (e.g., textbook and scholarly articles) are helpful. | 14 | 23 | **84%** | 4 | 3 | **16%** | 44 |
| Overall, I am satisfied with the CBA content. | 20 | 16 | **84%** | 4 | 3 | **16%** | 43 |

## Results

The results of the analysis and findings serve to answer each of the research questions for this study. The research questions are guided by the summative program evaluation format and intended to help university leaders determine whether the goals of the program were met in order to help them make decisions about whether to expand the program and what to improve.

### Comparison of CBA Students and Traditional Students in the Attainment of Competencies

The first research question asked how students in the CBA program compared to

students in the traditional online program with achievement of competencies. The null hypothesis was that achievement of competencies of CBA students and non-CBA students are the same. The alternative hypothesis was that achievement of competencies of CBA students and non-CBA students are different. The data did not meet the conditions to compare the two groups with a chi square statistical analysis. However, the percentage comparison between the CBA and non-CBA groups suggest that students in the traditional online course on average perform better than students in the CBA. A total of 85% of traditional students met expectations on competencies, and a total of 78% of students in the CBA met expectations on competencies. There was also a much higher percentage of CBA students that fell into the *limited evidence* category (18%) compared to the traditional course (6%). Therefore, the null hypothesis that students will attain competencies at the same level is rejected. Nevertheless, I have concluded that the differences in competency achievement may be due to the larger number of students who stopped submitting assignments after falling behind in the CBA, rather than poor performance on the competency. Generally, those students who handed in their assignments in the CBAs attained the competency, while those that fell behind didn't attempt the competency at all (as opposed to attempting and doing poorly on the competency).

My conclusion is supported by other data that was collected. For example, in the completion and pass rate data, out of the 50 students who did not withdraw from the CBA, 45 of them handed in at least one assignment and were included in the competency data; however, many of them stopped submitting assignments and did not end up passing.

This could indicate that students simply got behind and overwhelmed rather than that they did not have the ability to demonstrate competencies. Because the CBA was offered at no charge to the student, there were not any repercussions to the students if they fell behind and stopped submitting assignments, other than receiving a bad grade, so they may have chosen to simply stop submitting assignments. Another data point that supports my conclusion comes from the faculty focus group interview. The faculty mentioned in the focus group that they felt students achieved the learning outcomes at the same level as students in the traditional course, if not marginally better. Student survey data also indicated that a majority of students (82%) agreed or strongly agreed that they achieved the learning outcomes.

**The Pace at Which Students Completed Assessments**

The second research question asked about the pace at which students completed the assessments in the CBA within the given time period. Because the CBA was a self-paced format, university leaders were interested in the pacing of assignments given the absence of deadlines. At the onset of the pilot, faculty had voiced concern about the potential for students to wait until the end of the eight weeks and then hand everything in all at once. Based on the faculty focus group interview, the concern about students' waiting until the final due date to hand in all of the assignments remained a faculty concern, even though it did not happen very often during the pilot.

The results indicated that only 32% of students who completed the CBA handed in the majority of assignments over two weeks late. The data also suggests that graduate students hand in assignments in a timelier manner than undergraduate students, which

could indicate that more mature students are better at managing time and workload. However, in two graduate courses (ORG530 and FIN570) the majority of students were behind as opposed to only one undergraduate course (HCM370). There is too little data to draw conclusion about the type of course where students fell behind. The three worst performing courses were in different disciplines and within disciplines there is wide disparity, as seen in the three healthcare courses (HCM370 at 75%, HCM502 at 33% and HCM520 at 0% of students handing in the majority of assignment over two weeks late). This data may alleviate faculty concerns that students will fall behind and then hand in everything at the end of the CBA. The data indicates that most students who fall behind do not end up passing. Results suggest that it is important to find students who are the right fit for the program and who can self-regulate and complete goals in a timely manner without having deadlines to keep them on track.

**Student Completion and Pass Rates**

The third research question asked what the completion and pass rates of both graduate and undergraduate students were. The completion rate results show that 83% of students who were enrolled in the CBA did not withdraw. The data also indicates that undergraduate students completed at a higher rate than the graduate students. However, this data set was influenced by the fact that, for the CBA pilot, the university allowed students to withdraw after the deadline to drop the course. Because the students did not pay for the CBA, there may have been a higher tendency for some students withdraw if they got behind in their work.

As for the passing rates, the results show that the overall passing rate was 60%, meaning that 60% of students passed with a score of 70% or higher. Both undergraduate and graduate students passed at the same rates, suggesting that the CBA model may be no better for one level of student over the other. There were no clear patterns among the CBA regarding the type of CBA where students did or did not perform well. For example, even though the undergraduate accounting (ACT410) and graduate-level project management courses (PJM525) had the highest passing rates, because their subject matter is dissimilar, and the numbers enrolled into each CBA so low, no clear conclusions can be drawn without more data. Additionally, one graduate CBA in the area of healthcare, HCM502, had the lowest passing rate (20%), but another graduate-level CBA in healthcare, HCM520, had a much higher level of passing rate (80%). This suggests again that the low numbers of students who were enrolled can greatly affect passing percentages and that more data is needed before clearer conclusions can be drawn. Survey feedback on the lower-performing courses indicated that students struggled due to instructor issues, so things like course quality and instructor quality may have had a greater effect on passing rates than the type or level of the course.

**The Perceptions of Stakeholders**

The fourth and final research question asked what the stakeholders' perceptions of the CBA program were. Stakeholders as defined in this study are students, faculty, and student advisors. Data was gathered from a variety of sources to answer this research question. Quantitative and qualitative data was gathered from student surveys. Additionally, three different stakeholder groups were interviewed: students, faculty, and

student advisors. Because the program was intended to ultimately benefit students, leaders at the university were interested in getting their input regarding what they liked and what they didn't like about the CBA format. Additionally leaders at the university wanted input from faculty and staff who were in direct contact with students and directly supportive of their learning in order to get their perceptions.

The quantitative survey results provided some data regarding student perceptions. Results indicated that 87% of students liked the self-paced format of the CBA and 69% of students preferred submitting short writing assignments instead of participating in discussions. In addition to the quantitative data, all stakeholder's described in detail their perceptions of the CBA program though the qualitative data. Qualitative data came from the open-ended questions on the student survey as well as the student interviews, student advisor interviews, and the faculty focus group interview. After analysis of all of the findings, several themes emerged from all of these data sources.

**Theme 1: Good for Some But Not for All**

One theme that emerged from the qualitative data was that the CBA is a good option to provide to students, but stakeholders perceived that only certain kinds of students are going to be successful in the self-paced format. Both faculty and student advisors described a similar student profile that would be ideal for this type of model, including students who are self-motivated, organized, self-sufficient, focused on their goals, consistently hand in their assignments on time or early, and have had proven success in earlier coursework. These characteristics support the constructs of both social

learning theory and adult learning theory, particularly in the area of being self-directed, self-motivated, and displaying self-efficacy.

Students used the same kinds of characteristics when describing why they thought the format worked well for them. One stated, "I tend to get it [coursework] done and if there's deadlines I'm going to get it done by then if not earlier, so I think that's just my personality." Another stated, "I knew that if I didn't keep myself on a schedule . . . that I wouldn't succeed." Some students mentioned that they were motivated by staying focused on their goals because they wanted to be that much closer to finishing their degrees.

Because faculty members perceived that this type of program may not be for everyone, they discussed ways for possibly screening for the type of students that are the best fit for enrolling in the CBA, although not all felt that it was necessary and that students could simply be educated about what they are getting into and let the student decide if it would be a good fit for them based on their personality. A student advisor also felt that the CBA is not a good option for some students, and she explained that, just by her initial experience with students in the enrollment process, she could tell who was more likely to be successful. "Something as simple as being able to return the CBA form with my only asking once and not having to go after them two or three times" could be an indicator of success. If students are not able to be screened to find the right fit, then some stakeholders felt that the university should provide students with clear expectations about what the CBA is about and what it entails.

**Theme 2: Student Success Factors are Self-Motivation and Professional Experience**

Some faculty and an advisor mentioned that having professional experience was an important contributor to student success. Their perceptions have been based on their experiences with students as well as a natural assumption that if students already have content knowledge learned through professional experience that they will be able to quickly demonstrate competencies and show success in what they already know. This idea aligns well with adult learning theory, which recognizes the important role of the learners' past experiences. While some students also said that professional experience was helpful, they felt they could have been successful in the course without having it. One exception was in technical or skill-based courses (such as accounting and IT), where students said professional experience could contribute a great deal to success in the course. In sum, the students' desires to succeed and achieve goals were mentioned more often in the survey responses and student interviews than professional experience as a success factor.

**Theme 3: Attainment of Competencies**

Another theme that came up from the interviews was in the area of student learning and the attainment of competencies. One advisor and some faculty had concerns about the level of student learning and whether students were acquiring the same amount of knowledge as they would in a regular course. Two faculty members recommended having some kind of objective test at the end of the CBA to ensure that students learned the material. However, no students mentioned that they felt they were learning less than in a regular course. One woman mentioned that, even though the discussions were

changed to short answer assignments, she didn't feel that she learned any less than in a traditional course. Another said, "I think I learned quite a bit. Probably more than I would in a regular course." Some mentioned that the CBA was harder than the traditional course because instructor expectations for the short answer assignments were more stringent than they were for discussion responses. Quantitative data from the student survey supports the student perception, with 82% of students saying that they agreed or strongly agreed that they accomplished the learning outcomes. These results tie into Bandura's construct of perceived self-efficacy, which is a person's belief that actions will produce desired results. Perceived self-efficacy helps to explain why students believed they accomplished the learning outcomes at the same level or even better than with a traditional course. Student learning was one area where the perceptions of faculty and staff slightly differed from those of the students. Where it was a concern for some faculty and staff, it was not a concern for students.

**Theme 4: Student Support by Faculty**

Another theme that came from the interviews was in the area of student support by the faculty. One advisor had concerns about the lack of instructor support, and said that it was the "most difficult thing" about advising students in the CBA because the advisors were unable to answer curriculum and content questions. When students had questions about assignment requirements or the course subject matter, some felt they had no instructor to go to. Students needed help with, as one advisor mentioned, "the curriculum and what normal professors would help their students with." On the faculty side, one faculty member mentioned that lack of involvement with the students was an

adjustment. He stated, “I need to interact with that student just a little bit just to make sure they are on the right track, so for me, I guess that was kind of an issue.” Other faculty said they didn’t see much difference between facilitating a regular course and being a faculty evaluator in a CBA.

On the student side, some students also mentioned that they wanted more instructor support. One stated, “The only improvement, I think, would be to have an instructor that’s assigned to the course that you could reach out to if you have questions.” Others felt like their instructors were quite responsive and provided good feedback on assignments. Much like with traditional courses, there were inconsistencies in how responsive the faculty members were and in the amount of substantial feedback the faculty evaluators provided. This can be concluded because some students gave very positive feedback about their faculty evaluators while others expressed disappointment. While some students missed the interaction with faculty, one student mentioned that he did not see the need for instructors, so the CBA was ideal for him and he didn’t see much difference between a CBA and a regular course. He stated, “The instructors are essentially irrelevant other than providing that feedback.” As leaders at the university think about potential improvements to the program, they will want to consider providing more availability of faculty to students so that students who need it know where to go when they need support.

**Theme 5: Peer-to-Peer Interaction**

A final theme that surfaced from the interviews is the theme of peer-to-peer interaction. Although this theme was not initially mentioned by faculty, it came up with

one advisor and some students, who said that it was something they missed while they were taking the CBA. Even though some students missed having peer interaction with other students, they said they did not want to have discussion questions as they do in the traditional courses, and they preferred doing the short answer assignments instead. Only one student mentioned missing the discussion forum, and many others said they did not find discussions valuable and said did not miss them at all. However, some students mentioned that it would be nice to be able to reach out to other students or have a forum where they could discuss different assignment approaches or even when course links were not working to see if others were having the same issues. One advisor mentioned that she received feedback from students saying they needed interaction and said, "I think that just attests that people still learn from that interaction." When the faculty discussed the possibility of having more student interaction, they were open to the idea of providing a general introduction area or open chat area, but they did not want to monitor and respond to any kind of required posts in the CBA format. Based on this theme, leaders at the university may want to want to consider allowing students to see each other and be able to interact in some area of the CBA in the future.

## Summary of Results

The qualitative and quantitative findings of this mixed-method study address the main problem of this study, which is that university leaders need information about the CBA program so that they can make decisions about how to improve and expand the program. All stakeholders, had positive feedback about the program overall and said they would participate the CBA program again. The faculty and advisors generally agreed that

it was good to provide choices and options to different kinds of students. One faculty member said, "We've got to have more than one route to success. The world's a'changin' and I think a lot of times folks are looking for different options for different reasons, and I think this is a great one." Even though there is room for improvement in this model, stakeholder perceptions were generally positive.

The quantitative data provided numerical indicators of student the success factors of completion rates, pass rates, competency achievement, assignment submission rates, and quantitative survey data. Overall, 83% of students did not withdraw from the CBA pilot program, and, of those who stayed enrolled, 60% of them passed. Of those who stayed enrolled, 78% of them met expectations on the course competencies, although 78% is lower than the 85% of students who met expectations on competencies in the traditional courses. The differences in competency achievement may have been due to factors such as students who stopped handing in assignments because they got behind rather than the inability to do the work. Quantitative data from the pace of assignment submissions revealed that only 32% of students who stayed enrolled handed in the majority of their assignments over two weeks late. Lastly, quantitative data from the student survey revealed that 84% of student survey respondents agreed or strongly agreed that they were satisfied with the overall CBA content. Each of the quantitative data points can help university leaders to draw conclusions about how to improve the program.

In addition to the quantitative data, the analysis from the qualitative data has revealed five main themes, some of which tie into the theoretical frameworks for this study. The first theme was that stakeholders perceived that the CBA format was a good

option for some kinds of students, but not for all students. There was recognition that the self-paced format only works well with students who are self-motivated and self-driven, with good organizational and time-management skills. Stakeholders described, (or self-described, in the case of students) the qualities that students need to have to do well with this type of model: self-motivated, organized, self-sufficient, goal-focused, timely, and academically successful. These traits are supported by Bandura's social learning theory which incorporates motivation the role of self-regulation.

The second theme that arose from the qualitative data was that stakeholders perceived that student success factors were self-motivation and to some extent professional experience in the content area of the CBA. More than experience, students mainly attributed their success to being self-driven and goal-oriented more often than having previous experience. These traits are supported by the theoretical framework of adult learning theory—particularly in the area of adult learners being motivated to complete goals. The third theme had to do with attainment of competencies. Although some faculty and an advisor perceived that students may not have learned at the same level with the CBA format, the students did not feel that they were learning less than in a traditional course. The fourth theme was about student support by faculty. All stakeholders perceived that some students needed they wanted more instructor support, including that instructors should be available when students had questions. Lastly, the fifth theme that came from the qualitative data was in the area of peer-to-peer interaction. Some, but not all, students perceived that they missed interacting with others in the CBA format. Faculty and student advisors also perceived that students could benefit from the

ability to reach out to each other. In addition to the qualitative data, quantitative data and resulting themes can help university leaders to draw conclusions about how to improve the program.

## Project Deliverables

University leaders can consider several types of improvements based on the qualitative and quantitative data that has been collected and analyzed. The data results underscore the importance of enrolling students who are the right fit for the program. The program is not a good fit for students who are not independent and self-motivated, and it is not a good fit for students who tend to procrastinate or lack time management skills. The CBA format is also not a good fit for students who want to interact with other students, although that capability could be added to the CBA structure as a future improvement if university leaders chose to allow student interaction. The recommendation is for the university to target the right kind of student to enroll in the program. The university can consider how to find or screen for students that are the best fit for a self-paced, competency-based program. Students who enroll in a CBA should like to hand in things early, be organized, be self-motivated, and be self-sufficient. There could be screening criteria added, such as a certain GPA or proven success in past courses. The university can also consider requiring professional experience for more technical courses. Additionally, students should be provided with clear expectations and be told the potential pitfalls so that they know what they are getting into. They should be informed about the level of rigor and the importance of keeping up with their coursework.

Other improvements can be considered in the area of instructor support, student learning, and peer-to-peer interaction. It is recommended to provide more instructor support for students while they are taking the CBA. There can be more direct instructor interaction, making it clear to students where to go for help, and making sure instructors are available for curricular and content questions. In the area of student learning and gauging the level at which students attain course competencies, it is recommended that the university continue to gather data and compare it to the data from the traditional courses to see if students are performing at the same level. This type of analysis, if published, would be welcome in the field of competency-based education. Lastly, to address the theme of peer-to-peer interaction, it is recommended that the CBA format allow for more peer-to-peer interaction. This would allow students to feel less alone and could potentially result in more engagement. The CBA could provide a forum for introductions and a general chat area for students. However, there would be no requirements for posting or participation, and the instructor would not be required to monitor the forum or chat. All of these improvements and recommendations would not require significant university resources and would be straightforward for the university to implement.

Other improvements that were mentioned that did not fall into a theme are to potentially improve the faculty pay, improve the quality of the course assignments course content (which would apply to both the traditional course as well as the CBA), and retrain faculty on the grading expectations and the importance of leaving significant and useful feedback, which are currently part of university expectations but which some students

mentioned as being an issue for them with the CBA. As university leaders look toward expanding the CBA program, the data suggests that they may want to revisit course curriculum and faculty training to address issues that could benefit all students, not just those in the CBA.

Section 3: The Project

## Introduction

The project for this research study is a final synthesis report of the CBA program pilot using the CIPP evaluation model. The final synthesis report pulled together the findings from the research in order to inform university leaders about what was planned, what occurred, the evaluation findings, and the assessment of the program. The problem that was identified for this study was that university leaders need to determine how to improve and expand the CBA program, and they did not have the necessary information they needed in order to make decisions. Therefore, the goal of the final synthesis report is to provide university leaders with the information they need to improve and expand the program.

Stufflebeam (2007) recommended organizing the report into three sections: program antecedents (to provide background information), program implementation (for those who may want to replicate the program), and program results (for all members of the report audience). The final synthesis report for the CBA program followed this general structure. The program antecedents section provides background information regarding the program's origins and context. The program implementation section gives a detailed account of how the program was planned, funded, and staffed so that those interested in replicating the program have insights as to how they might conduct a similar implementation. The program results section provides information on the evaluation design, findings, and conclusions divided into each of the CIPP areas: context, input, process and product. Stufflebeam provided a checklist for writing an evaluation report

using the CIPP evaluation model, which was used to guide the construction of the final synthesis report. A rationale for selecting the program evaluation approach, a description of the project—including a scholarly review of the literature regarding program utilization and the findings of the evaluation—and a discussion of the project implications are presented in this section.

## Rationale

A program evaluation was chosen as the approach to the project because university leaders needed to make decisions about the merits of the CBA program, how to improve it, and whether to expand it. By their nature, program evaluations are investigations for the purposes of decision making that lead to improvement of a program (Yarbrough et al., 2011). This program evaluation considered and applied the JCSEE's program evaluation standards during the planning, implementation, and evaluation stages. Elements of the following five attributes were applied to the final evaluation report: utility, feasibility, propriety, accuracy and accountability (Yarbrough et al., 2011). Utility standards were addressed because the final synthesis report met stakeholder needs by providing them with information and recommendations. Feasibility standards were considered as the program evaluator found effective and efficient project management techniques with which to manage the program implementation. Propriety standards were met when the program evaluator protected the rights and dignity of program participants, as well as provided full transparency of all evaluation activities. Accuracy standards were fulfilled through systematic information collection that resulted in valid findings and data-based recommendations. Finally, accountability standards were addressed through

the creation of the final synthesis report that fully documented the context, input, process, and product of the program evaluation. Application of JCSEE's program evaluation standards increased the quality of the evaluation and its associated documentation.

There are many different theories and methodologies to program evaluations such as those that are focused purely on method, those that focus on the role of the evaluator, and those that are oriented toward improvement and decision-making (Alkin, 2004). The CBA pilot program was evaluated with the CIPP evaluation model, which is a model that is focused on program improvement. Daniel Stufflebeam, the creator of this model, intended that the CIPP model focus on improvement rather than proving something about a program (Frye & Hemmer, 2012). Therefore, the CIPP model was chosen for the CBA program evaluation because it was focused on improvement and decision making in order to address the problem of the study which was that leaders needed information in order to make decision about the program.

The CIPP model is a useful approach for an educational program evaluation because it takes into account complex and changing relationships that exist in educational settings. The model can accommodate the non-linear and dynamic nature of educational programs while also satisfying stakeholder needs for program improvement data (Frye & Hemmer, 2012). The qualitative and quantitative data that was gathered and analyzed for this study lends itself well to an improvement-oriented program evaluation. The qualitative survey and interview data provided participants with the opportunity to recommend improvements based on their experiences. Additionally, when participants described their perceptions of the program from their own perspectives, several common

themes arose that provided useful insights for improvements. The quantitative data led to findings about student performance for leaders to consider when determining expansion and improvement strategies. The CIPP evaluation model allowed the university's educational leadership to understand the program in its entirety because it is focused on not just the outcomes of the program, but on consideration of the program's context, various inputs, and distinctive processes (Frye & Hemmer, 2012). It provides stakeholders with information about not only whether the program met its goals, but on how to improve and sustain program accountability.

## Review of the Literature

Educational programs are typically created in order to improve something, such as academic performance, the educational institution, and ultimately the larger society. In order for improvements to happen, the evaluation should be utilized and improvement recommendations should be implemented and reevaluated over time. Therefore, this literature review is focused on the utilization of program evaluations, with emphasis on the use of evaluation results. In addition to published books, I looked up articles in utilization and evaluation use from leading program evaluation journals such as *The American Journal of Evaluation*, *Evaluation*, and *New Directions for Evaluation*. This literature review also explores current research as it relates to the themes of that emerged from the results of the evaluation. I looked for articles in educational databases, including Education Source, for articles related to online college students as self-regulated learners, the role of motivation in online students, and research related to faculty and peer interaction in online college courses. Should university leaders decide to implement the

recommended improvements, the scholarly literature can serve to support evaluation utilization as well as the themes that emerged from the evaluation results.

**Evaluation Use**

Program evaluations should be done in such a way that the end results are used, so attention should be given to how to foster evaluation use. Grounding the program evaluation in current theory using established practice is one way to lend credibility to the evaluation and promote its eventual use. Rog (2015) posited that evaluation practice must be infused with different types of theory to help evaluators perform better in their role, particularly as their role compares to a methodologist or an isolated researcher. Rog also stated that practice can in turn influence theory, and the field of program evaluation will be strengthened when theory-practice integration is explored. One area of evaluation theory deals with evaluation use, and many theorists—including Stufflebeam—fall into this area (Alkin, 2004). In their literature review, Chinta, Kebritchi, and Elias (2016) found that Stufflebeam's CIPP evaluation model is widely used in educational settings both nationally and internationally. They wrote that CIPP is a popular model in education because it provides a comprehensive look at the complexities of social contexts and inputs, assesses the program's process, and the product stage fosters measurement and judges the outcomes' worth and significance.

To lend further credibility to the CIPP model, recent studies that have utilized the CIPP model in higher education have indicated that it is appropriate for evaluation of educational programs and projects, which may be complex and have multiple goals and multiple stakeholders (Tokmak, Baturay, & Fadde, 2013; Zhang et al., 2011). Utilizing a

theoretically-based and accepted evaluation approach, such as Stufflebeam's CIPP evaluation model, can result in a greater potential for use.

Even with a strong program evaluation model, the results of the evaluation need to be used in order for the evaluation to fulfill its function. Evaluation utilization, also known as evaluation use, has been a focus in the field of program evaluation since it began (Alkin & King, 2016). Because of the emphasis on potential use, program evaluations distinguish themselves from research studies. Rather than add to a base of knowledge in a given field, as research studies do, program evaluations attempt to provide insights that lead to improvements (Alkin & King, 2016). Interest in evaluation utilization began developing in the United States in the 1960s, mainly due to growth in evaluation demand during these years (Alkin, 2005). Early research identified three groups of factors associated with greater a likelihood of evaluation use: characteristics of users, context, and the evaluation itself (Alkin, 2005).

Additionally, utilization is recognized in JCSEE's *Program Evaluation Standards*, and *utility* is the focus of the first of the standards. The Utility Standards focus on eight qualities that foster the use of the program evaluation to serve stakeholder needs (Yarbrough et al., 2011). The first quality is *evaluator credibility* and deals with the ability of the program evaluator to establish and maintain credibility (Yarbrough et al., 2011). Alkin (2005) stated that evaluator credibility is the most influential factor for whether stakeholders recognize and utilize evaluation. "Perhaps of greater importance than the evaluator's expertise are his or her personal characteristics, such as personality and style . . . . Of greatest importance, however, is the evaluator's commitment to

wanting use to occur" (Alkin, 2005, p. 435). Thus, the program evaluator is thought to be a significant factor for whether the evaluation is used.

There are other research findings about what contributes to evaluation use. Contandriopoulous and Brousselle (2012) performed a systematic review of evaluation use results at organizational policy-making levels from seminal papers and other relevant documents. As a result of their in-depth analysis, they proposed a framework for better understanding the relationship between the evaluation context, the evaluation model, and the use of results. The results led them to the conclusion that it is the evaluation context that affects both the appropriateness of the selected evaluation model and the use of the evaluation results. Another study by Ledermann (2012) sought to contribute to the study of evaluation use by examining 11 program evaluation cases by a Swiss organization that routinely performed evaluations in a similar fashion every year. Ledermann attempted to identify the conditions necessary to trigger evaluation use in specific contexts. Ledermann found that no single condition alone was necessary for evaluation use, or non-use, due to the complexities and dynamics within organizations, and that defining the contexts necessary for use is more adequate. Among Ledermann's context-based findings were that a program evaluation can trigger change in a high pressure, low conflict context where stakeholders are aware of a problem to be solved but only if the program evaluation is considered to be of good quality.

Finally, in support of Alkin's belief that the greatest influence on evaluation use is the evaluator's commitment to promoting change, there is recognition that it is not enough for an evaluator to only possess methodological skills, but soft skills are also

necessary. Catsambas (2016) reviewed typical evaluation tasks and outlined the similarities between good facilitation skills and the skills expected of an evaluator. Catsambas concluded that evaluators should be challenged to become skilled facilitators which would result in enhanced effectiveness and use of evaluations. Catsambas (2016) stated that at minimum, she stated, evaluators should have basic facilitation skills to organize, negotiate, and implement an evaluation. However, to be the most effective, evaluators should acquire advanced facilitation skills and if possible participate in leadership development and executive coaching. Skilled facilitation, along with performing quality evaluations grounded in theory and focused on the JSCEE's utilization standards, will serve to better foster the use of evaluation.

**Review of Thematic Evaluation Results**

There is much literature to be found regarding the themes that surfaced from the qualitative research results. The qualitative research question centered on student, faculty, and student advisor perceptions of the CBA program. Five themes emerged: (a) good for some but not for all, (b) student success factors are self-motivation and professional experience, (c) attainment of competencies, (d) student support by faculty, and (e) peer-to peer interaction. Four of these themes are explored in detail. The theme of *attainment of competencies* was not explored because I have explored *assessment of competencies* in the prior literature review. Literature on the remaining four themes provides support and insights into the research findings as they pertain to college-level online learners.

**Good for some but not for all.** Data analysis revealed that students, faculty, and advisors perceived that the CBA program was a good option to provide to students, but

not all students were a good fit for the program. Participants for the CBA study said that students who are self-directed, independent, and self-regulated were the best fit for a self-paced and competency-based online program. Research has supported the relationship between students' self-regulation and performance. Wang, Shannon, and Ross (2013) studied the relationship between students' self-regulation and its effect on student grades and satisfaction. They found that when online students use self-regulated learning strategies, their levels of motivation increased, and increased motivation in turn led to higher levels of course satisfaction and better performance.

Because self-regulated learning, or SRL, has been recognized as a student success factor, particularly for online students, there have been studies done to better understand the characteristics of self-regulated online students. Two recent studies focused on the SRL strategies of students enrolled in Massive Open Online Courses (MOOCs). One study by study by Kizilcec, Pérez-Sanagustín, and Maldonado (2017) recognized that SRL is critical in online learning environments with low levels of support and guidance. In their research of which SRL strategies are most important for online learners enrolled in MOOCs, they found that goal-setting and strategic planning predicted students' attainment of their course goals. Moreover, they found that students who were inclined to seek help had lower goal attainment and were less likely to pass assessments. In another study of learners in MOOCs, the researchers compared behaviors of students with high and low SRL scores and found substantial differences in learning behaviors between students with high and low SRL scores (Littlejohn, Hood, Milligan, & Mustain, 2016). The results from the study indicated that students with high self-regulated learning scores

had internal motivators and set goals that were focused on their development of knowledge and expertise that is tied to their workplace success.

Even though self-regulated learning has been recognized as an important factor contributing to student success in an online environment, not all students have developed the self-regulatory behaviors that they need to navigate independently in an online learning environment. A report by the Association for the Study of Higher Education (ASHE) stated, "Students often need to develop their capacity for self-discipline or self-regulatory behaviors" (ASHE, 2014, p. 92). The report suggested that students may need help from their instructors on how to improve their own learning skills and also suggested that course designers should intentionally create a learning environment that can help students develop skills related to self-regulation.

Studies have looked at how to better support students with self-regulated learning. Rowe and Rafferty (2013) reviewed a variety of studies that looked at different SRL learning interventions and how they enhanced learning outcomes in online environments. From their review, they provided several recommendations for pedagogical interventions and course design activities aimed at supporting SRL such as using discussion board prompts to engage students in dialogue about their goals and strategies for reaching them (Rowe & Rafferty, 2013). Lee, Pate, and Cozart (2015) also recognized that success in online learning depends on strong self-regulation and autonomy. They proposed three guidelines to support student autonomy: providing choice in course activities, providing explanation and rationale for course assignments, and providing opportunities for personalization of course activities so that students can

work on personally meaningful projects. Research on self-regulation and self-direction supports the CBA research findings that the CBA format may not be a good fit for everyone and that students who already possess SRL skills are a better fit for the program.

**Student success factors are self-motivation and professional experience.** From the qualitative data that was gathered in the CBA study, students, faculty, and advisors all recognized that student motivation was important to being successful in the program. Although prior experience was also mentioned by faculty and an advisor as being important to success, the students themselves felt that their motivation and a desire to succeed and achieve goals were more important aspects. As with self-regulation, motivation has been found to have an effect on student performance. For example, Liu, Bridgeman, and Adler (2012) found in their study that motivation significantly affected test performance on the ETS® Proficiency Profile, a nationally normed measure of student learning. Additionally, Xie and Huang (2014) sought to discover the relationship between students' motivation, learning participation, and their perceptions of their own learning. The study results suggested that motivation played a significant role in the prediction of students' perceived learning as well as in their learning participation. One study in particular supports the notion that motivation is a stronger determinant of performance than professional experience. In their study of the factors contributing student performance in online learning, Castillo-Merino and Serradell-López (2014) found that motivation is the main variable for students' achievement, more than many other determinants including work experience.

It has been recognized that motivation has many components, and there are different types of motivations such as intrinsic and extrinsic. Johnson, Stewart, and Bachman (2015) stated that there are two basic motivation orientations: intrinsic, which has an inherent benefit to the individual such as personal enjoyment or fulfilling an internal goal, and extrinsic, which has an external benefit to motivate behavior such as career growth. They studied which kind of motivation drives students to complete their online courses. Their study found that online students with extrinsic motivation completed greater numbers of online courses, notably contradicting past research that indicated intrinsic motivation is related to student persistence (Johnson, Stewart, & Bachman, 2015).

Another study investigated motivation as a contributing factor to engagement and investigated which motivational factors contributed most to engagement with online courses (Yoo & Huang, 2013). The researchers identified four motivational factors: intrinsic, short-term extrinsic, long-term extrinsic, and willingness to learn new technologies. They concluded that adult learners have complex motivational needs and that online curriculum must incorporate workplace relevancy. Lastly, Yau, Cheng, and Ho (2015) studied different motivational components in using technology for learning and their relation to each other. Student motivational components included confidence (in their success), relevance (of the learning to their live and future work), satisfaction (with the learning experience), and interest (in the learning materials). Two of the major findings of the study were that there were significant relationships among relevance, confidence, and satisfaction. There were also positive relationships among relevance and

interest (Yau, Cheng, & Ho, 2015). This type of study is important as online educational providers find important factors that can contribute to an online student's motivation.

As with self-regulated learning, there have been studies dedicated to finding ways to increase and support motivation of online adult students. Boton and Gregory (2015) studied ways to minimize attrition in online courses and offered a range of strategies to promote engagement. They suggested that low motivation is a contributor to attrition and the reasons for low motivation were students' lack of interest as well as having too many professional or other commitments. The researchers discussed potential ways to help students stay motivated such as incorporating multimedia resources in the course, the instructor's regular and frequent online presence in the course, providing problem-solving activities, and providing authentic activities related to real-world situations (Boton & Gregory, 2015). Even small motivational strategies can be effective. A study by Al-Asfour (2014) evaluated whether the use of instructor e-mails served to motivate and retain online students. Al-Asfour found that communicating positively with students is a valuable tool to increase motivation and participation. Understanding the components of motivation and focusing on ways online institutions can support student motivation is an important factor of student success.

**Student support by faculty.** During the CBA program pilot, the faculty took a hands-off role and served to only evaluate and provide feedback on student work and answer student emails if the student contacted them. The qualitative data that was collected after the pilot revealed that advisors, faculty, and some students thought faculty should take a more interactive and supportive role during the CBA. This finding is

supported in the literature about online learning in general. As online learning in higher education becomes more and more widespread, many studies are being done about what is effectively working in an online modality, and faculty involvement and interaction is commonly mentioned as a student success factor.

In a study of student and instructor perceptions of online learning, Pihlajamaa, Karukka, and Ålander (2016) found that difficulties in interaction between instructors and students was a common challenge in online higher education, although this challenge was only perceived by students and not by faculty members. They suggested that there be improved interaction among instructors and students in order to ensure high quality learning outcomes. Another study by Fayer (2014) of student perceptions about what contributes to their success in online courses revealed qualities that students perceived they valued most in an online learning environment. One quality was that students valued having confidence in the instructor's content ability and in the instructor providing consistent support. Another was that students need timely, positive, and supportive feedback (Fayer, 2014). Fayer recommended that instructors need to provide consistent, timely, and positive feedback and support to students to promote their success.

Chakraborty and Nafukho (2014) conducted a literature review approach that focused on successful student engagement strategies within the field of online higher education. In regards to instructor interaction, their findings were consistent with Fayer's in that they found it was important to provide consistent and timely feedback in order to increase student engagement. Not only does student engagement increase, but Lundberg and Sheridan (2015) found that student learning increased when they performed a study

of students who were enrolled in online courses. When they investigated which elements of the learning experience were the predictors of learning, they found that student leaning increased when faculty provide feedback that is motivational and when they encourage students to work hard. Lundberg and Sheridan (2015) suggested that professional development programs for online faculty should focus on methods for encouraging students and motivating students to work hard.

A hallmark of the CBA format was the elimination of required online discussion questions. There was concern that students would not like the elimination of the interaction that took place among each other and with instructors. However, the qualitative data revealed that while some students missed interaction, they did not particularly miss the required discussion participation. Recent research has supported this finding. Cho and Tobias (2016) performed an experimental research study on the online required discussion and its effects on social connection, satisfaction, and achievement. They compared student groups that participated in no discussion, discussion without instructor participation, and discussion with instructor participation. They found that discussion interaction did not contribute to satisfaction or achievement, although it did help students feel socially connected (Cho & Tobias, 2016). The researchers noted that the discussions themselves did not influence student learning as long as the instructor was present through email, grading, and feedback. These findings support the removal of discussions for CBA courses and also support the recommendation that instructors be more supportive and engaged in the CBA. Additionally, the findings support the idea that students be provided with an optional area to interact informally within a CBA.

There has been evidence that instructor interaction, in whatever form, is important to student retention. Purarjomandlangrudi, Chen, and Nguyen (2016) investigated the literature on success and persistence in online courses to provide insights to why students drop out of online courses. They found one of the biggest factors that impact course completion is lack of interaction. They suggest that interaction is one of the most important components for online learners. As retention and attrition continue to be an area of concern with online education, it is important to keep an eye on such studies and help faculty members learn how to interact effectively with online students.

**Peer-to-peer interaction.** The theme of peer-to-peer interaction among online students has also been widely studied in recent literature. The CBA qualitative data revealed that some students missed having interactions with other students, although they did not miss the structured discussion format. This finding is supported by a study that focused on peer interaction as it pertained to attrition in online courses. Laing and Laing (2015) performed a review of existing theories and literature in order to develop a conceptual framework that takes into account the isolation and alienation of online courses and how they impact attrition. The researchers felt that a level of social presence is necessary in online courses to support interaction among students and help them to establish relationships that can lead to learning communities. Laing and Laing posited that learning communities will lead to increased retention and satisfaction. One of their recommendations is to include a socialization period in the design of online courses to support the development of social interaction among students (Laing & Laing, 2015).

This recommendation is similar to the recommendation from the CBA students to have an open discussion or chat area where students could interact with one another.

Other literature shows that peer-to-peer interactions are an important component of learning in an online environment, but typically not as important as other types of interactions. For example, when Joksimović, Gašević, Loughin, Kovanović, and Hatala (2015) studied the effects of different kinds of interactions (student-instructor, student-content, student-student, and student-system) on academic achievement, they found that among interaction types, student-system (meaning student interactions with the learning management system) regardless of type of course (foundational, core, or elective) had the most significant effect on achievement. They also found that there was a positive effect from student-student interactions for the core and elective courses, but not on foundational courses. They postulated that, because the foundational courses were focused on simple knowledge acquisition, student-to-student interaction may not have been as important (Joksimović, Gašević, Loughin, Kovanović, & Hatala, 2015).

A similar study by Kuo, Chen, and Kuo (2015) looked at three different types of interactions: student-student, student-instructor, and student-content. Among them, only student-content interactions were found to be a significant predictor of student satisfaction, and only student-content interactions were found to be positively related to student performance. University leaders can point to these studies if concerns about lack of student-to-student interactions becomes a concern about the CBA program.

In another study, Hew (2016) looked at three top-rated MOOCs to find the specific factors that contributed to student engagement. Hew found five factors that

promoted engagement, and peer interaction was the fourth in order of importance. It fell behind problem centric learning that provided simple-to-understand explanations of concepts, followed by instructor accessibility and passion, and then by active learning. Thus, while peer interaction was important to engagement, it was not found to be the most important thing (Hew, 2016). The results of these types of studies support the recommendation that when the CBA program is improved it should provide an optional area for students to interact in the learning environment.

## Project Description

The project of this study is a final synthesis report that was written utilizing the CIPP program evaluation model. The report is organized into three sections according to Stufflebeam's recommendations for writing a final report: program antecedents, program implementation, and program results (Stufflebeam, 2007). The program results section includes the evaluation findings and the recommendations for improvement, which will be the focus of this section as resources, barriers, implementation, and roles and responsibilities are discussed.

### Resources and Supports

The final synthesis report contains several recommendations for program improvements for which there are existing resources currently available at the university. In terms of program expansion, university resources are already in place to expand the CBA program. Because the CBA utilizes the same course content as the traditional version of the online course, the university is already staffed for the minor curriculum requirements needed to convert a traditional course to a CBA. The time it takes to convert

a course to a CBA is around two hours per course, so depending on how quickly the university wants to expand the program, they could budget appropriately for a quick conversion of all courses or simply fold the CBA rollout into the existing work of the curriculum and course development department and convert courses as they are developed or revised.

One improvement that was recommended in the final synthesis report was for a screening process to be set up so that only students who are self-motivated, independent, and have good time management skills be enrolled in the program. The university should be able to use its own internal resources and personnel to develop and implement a screening process. The recommendations included a screening process as well as a student self-assessment, which can also be developed with existing university resources. There is a possibility that students may report that they are independent and motivated, but they may not actually be, or they may falsely answer screening questions so that they can enter the CBA because it is less expensive than a traditional course. That is why the recommendation to provide clear expectations for students about the CBA is and what it entails should also be implemented. Educating students about expectations can also be accomplished with current existing resources and support systems as part of the enrollment/screening process. In sum, recommendations regarding enrollment screening, student self-assessment of fit, and setting expectations can be developed and implemented using internal resources and within already-existing support structures.

Other recommendations in the final synthesis report included the continued study and analysis of student learning, especially as it compares to students in the traditional

version of the online course. It was recommended that the university continue to gather student learning data that compares students in the traditional online course to students in the CBA. This can be accomplished utilizing existing resources; the university already has a system in place for gathering student learning data and already has a process set up for data analysis as part of its program review processes.

Another recommendation was for the university to publish comparison data externally. For this particular recommendation, the university would need to perhaps encourage one of its faculty or internal staff members to run such a study and write it up for publication. However, this particular recommendation is not necessarily integral to the improvement or success of the program. Another recommendation was to consider adding objective tests to the CBA as a way for students to demonstrate learning. This could potentially be done as a pilot if the university wanted to pursue this recommendation, but as with the recommendation for publishing a study, this recommendation could be an optional improvement should the university wish to take it at some point. Since the university already has structures in place to measure learning, an objective test may or may not be truly necessary. If the university chose to run such a pilot, existing resources within the university's curriculum department could be utilized.

In the final synthesis report, there were several recommendations in regards to the role of faculty better supporting students who are taking the CBA. During the CBA, faculty members mainly only evaluated and provided feedback on student work. It was recommended that faculty members play a more active role in supporting and helping students. It was suggested that instructors be available to assist with curricular and

content questions, as well as engage in conversations about their evaluation feedback when students desired. Furthermore, it was recommended that clear communication be given to students regarding where to go for support and how to reach various support individuals, including faculty. These recommendations could all be accomplished with existing resources within the university. Faculty support information can be added to the CBA, as well as training for any CBA faculty regarding expectations for supporting students. If CBA faculty members are going to be expected to engage and support students at a greater level, it was also recommended that the faculty pay be increased to account for additional time commitment. The university would need to decide whether to absorb those costs or increase the student cost of the CBA to account for any additional faculty pay.

Lastly, the final synthesis report contained recommendations about providing the ability for more student-to-student interactions within the CBA environment so that students would not feel isolated and have the opportunity to engage with one another. This recommendation could be accomplished with existing resources because the online learning environment is already set up with a chat area for informal interactions. The chat area was turned off for the CBA pilot but could be made available for CBAs moving forward. There could also be a discussion area made available for students (and the faculty member) to post an introduction if they desire. Like the chat area, the introductory discussion post was not included in the CBA pilot, even though an introduction discussion post is typically included in the traditional online course. This could easily be set up in the CBA and, as with the chat area, it would require no additional university

resources. There would only need to be some information given to the students in the CBA that posting or chatting is an optional activity and would not be monitored or graded by faculty, because the recommendation from the final synthesis report was to have interaction be optional. In sum, the university should be able to accomplish all of the recommendations in the final synthesis report with existing resources and support systems.

**Potential Barriers**

As with any major change that affects multiple departments and stakeholders, there can be resistance and barriers to implementation. Any department that will incur additional work may be resistant to CBA implementation. For example, student-facing departments may see an additional program option for students as more work for them as they would need to explain it students, ensure the screening process took place, and enroll students appropriately. The curriculum department would incur some work as they will be charged with converting a traditional online courses to also have a CBA counterpart.

A way to overcome this type of resistance is to have strong leadership backing the CBA model at the top levels as well as strong leadership within each department. Leaders need to clearly communicate why the program is good for students and the university. As more data is collected and becomes available, leaders can provide evidence regarding the program and its successes. Strong leadership and commitment to use has been recognized as an important factor to the successful implementation of evaluation recommendations.

Another potential barrier to implementation is staff turnover. Patton (2005) recognized that the Achilles heel of the utilization of evaluation recommendations is

turnover of the evaluation's stakeholders. A way to overcome this vulnerability is to actively engage all evaluation users throughout the evaluation so that the departure of one or two people throughout the process does not endanger the implementation of evaluation recommendations.

It is not only the departure of evaluation stakeholders that pose a risk to the utilization of the evaluation, but, as was previously noted in the literature review, Alkin (2005) felt that the strongest influence on the utilization of the evaluation is the evaluator's commitment to wanting use to occur. Thus, a barrier to implementing the evaluation recommendations is the departure or reassignment of the program evaluator at the university. A way to overcome this barrier is to keep the program evaluator involved in the CBA to manage the implementation of recommendation decisions.

One last barrier may occur in regards to the recommendation to increase faculty pay to account for the additional time it will take faculty if they are expected to interact with students at a greater level than before. To overcome this barrier, university leadership would need to come up with a new pay model and potentially increase the cost of the CBA for students to cover the additional amount for faculty payments.

**Proposal for Implementation**

Several steps need to occur in order to implement the recommendations in the final synthesis report. First, the complete evaluation report will be distributed to the university provost, whose idea it was to create and implement the CBA program. The provost will review the report findings and recommendations and either approve or not approve the expansion of the program and the implementation of improvements. It is

possible that the provost may approve some recommendations and not others, or modify the program in some way prior to expanding it. Pending approval, the recommendations in the final synthesis report can be started immediately, and it will be up to the provost to determine whether the program evaluator continue in her role to implement the improvements.

**Roles and Responsibilities**

Regardless of whether I remain as the program evaluator and overall project manager, the improvements recommended in the final synthesis report need to have a project manager assigned to ensure that the recommendations occur. Ideally, I will remain in my current project management role to ensure completion of the approved recommendations because, as the program evaluator, I have the most in-depth knowledge of the context behind each recommendation. As with the initial CBA implementation, stakeholders and department leaders should be engaged in the implementation and decision-making process. Roles and responsibilities are represented in Table 11. It is also critical for the provost to initially be engaged to show department leaders that the university is backing the CBA program and the improvement recommendations. The program should undergo a reevaluation every three-to-five years, and a program evaluator should be engaged to ensure program evaluation standards are followed. Ideally it would be the same program evaluator that managed the first evaluation.

Table 11

*Project Roles and Responsibilities*

| Role | Responsibility |
|---|---|

| | |
|---|---|
| Head of Curriculum Department | Ensure the completion of the recommendation for students to have the ability for peer-to-peer interactions in the CBA. |
| Head of Student Advising | Ensure the completion of the recommendations for screening students and only enrolling students who are the right fit for the CBA. |
| Head of Finance & Operations | Determine faculty pay and finalize cost of CBA for students. |
| Head of Faculty Support | Ensure that faculty members provide more support and interaction with students taking the CBA. |
| Project Manager/Program Evaluator | Ensure that each department head completes improvements.<br>Perform comprehensive evaluation every three to five years that looks at the same data as the original evaluation in order to compare performance and perceptions over time. |

## Project Evaluation Plan

In terms of ongoing evaluation of the CBA program, summative evaluation should occur on an annual basis with a comprehensive summative evaluation of the program every three-to-five years. On an annual basis, CBA data can be distributed an analyzed as part of the university's annual program review process. Information should be provided to program leaders on completion rates, pass rates, grade data, and student learning, as currently occurs with the traditional online courses in every program of study at the university. CBAs should be held to the same institutional goals as their traditional course counterparts, and when goals are not met, an action plan for improvement should be created. The justification for an annual summative evaluation is to address issues on an annual basis rather than wait until the next comprehensive evaluation.

After three years, but no more than five, the university should conduct a larger, comprehensive evaluation of the CBA program. The comprehensive evaluation should gather and utilize the same data that the initial evaluation used. The data should include completion and pass rates, the pace of assignment submission, competency attainment, and student, faculty, and student advisor perceptions of the program. It should be noted in the final synthesis report if the implementation of the recommendations has had an effect on performance and perceptions of the CBA program, as well as indicate what further improvements should be implemented. The comprehensive evaluation will provide a new data set for comparison to the first evaluation as well as reveal insights as to whether improvement recommendations had their intended effects.

Stakeholders for both the annual and comprehensive evaluations include students at the university, who have the opportunity to complete degree requirements at a decreased cost; faculty and student advisors, who have direct contact with students in the program and will be the primary individuals providing support to students; and academic leadership such as the provost, program directors, and academic deans, who have a key role in providing quality curriculum and who also review programmatic data as part of annual program review. Academic leadership will ultimately decide what is in the best interest academically for the students and implement necessary improvements to the CBA program over the long term.

## Project Implications

There are several implications that can arise from the final synthesis report. The report will contribute to the growing research on competency-based education. Colleges

and universities can look to the process that was implemented, data that was collected, and outcomes from the report and begin to determine a potential model for their own educational institutions, should they wish to start a similar competency-based program. While the report provides an in-depth write up of one approach, aspects of it could be applied to other programs at other institutions. Because of the minimal effort it takes to convert a quality online traditional course into a CBA, the competency-based model—and even the pilot study itself—could be replicated at other institutions. Due to the nature of the CIPP evaluation model, the final synthesis report is written in such a way that it describes every aspect of the program for those who may wish to replicate it.

**Social Change Implications**

There will continue to be a need for institutions of higher learning to address the needs of adult, nontraditional learners. Many of these learners come to colleges and universities with a wide range of experiences and knowledge. Thus, a competency-based way for adult learners to earn college credit for what they already know would benefit them, particularly as tuition costs at colleges and universities continue to increase. As the final synthesis report indicates, the CBA program is a cost-effective and flexible way for students who are a good fit for the program to complete required coursework that can help them attain a degree. Competency-based models will continue to be explored to meet societal need of flexibility, access, and affordability (Nodine & Johnstone, 2015; Riskind, 2014). The CBA final synthesis report provides insights into student performance, student behaviors, and perceptions of stakeholders that contribute to the growing body of knowledge about competency-based education. Acceptance of

competency-based models continues to grow, and as these models become more available, they have the potential to impact society by helping more people complete their college degrees.

**Implications for the Local Setting**

The final synthesis report contains several implications for stakeholders at the local setting. The rationale for doing the study and providing the final synthesis report was that university leaders needed to make decisions about what to improve before implementing the program on a wider scale. At the academic leadership level, there was interest in whether students successfully completed the CBA as well as seeing what behaviors they exhibited and their performance on competencies. One area that leaders were interested in was whether there were any differences in performance between undergraduate and graduate students and between different types of courses. The collected data revealed identical pass rates between undergraduate and graduate students. It also showed that there did not seem to be any performance trends due to the types of courses that were taken. This can reassure leaders that the program can be expanded to many different courses types and both undergraduate and graduate degree levels.

While the quantitative data can serve to validate the expansion of the program, the qualitative data that was presented in the final synthesis report best revealed the ideas about what can be improved in the program. If implemented, the improvements suggested in the final synthesis report in regards to targeting the right kind of student, providing more faculty support, and providing the opportunity for peer interaction can strengthen the quality of the CBA program. It will ultimately benefit the university as it looks to

expand opportunities to its nontraditional learners for earning college credit at a decreased cost.

# Section 4: Reflections and Conclusions

The final synthesis report marks the culmination of this project study. The report describes the CBA program antecedents, provides an in-depth look at the program implementation, gives a detailed account of the evaluation results, and lastly presents improvement recommendations. Conclusions as to the report's strengths and limitations, alternative approaches to the problem, a discussion of the importance of the work, and directions for future research are presented in this section.

## Project Strengths and Limitations

The problem addressed by this project study and in the final synthesis report was that university leaders needed to determine the how to improve and expand the CBA program, and they did not have the necessary information they needed to make decisions. There are strengths and limitations to both the evaluation model and the final report itself. A strength of the CIPP evaluation model is its emphasis on improvement, which was useful to university leaders who needed to be provided with information in order to determine what to improve. University leaders intentionally started the CBA program as a pilot so that they could try the CBA format with a small number of courses and learn from the data that was gathered. The final synthesis report was summative in nature and included both qualitative and quantitative data, both of which were needed to fully address the research questions of the study. By taking a mixed-method approach to the collection and presentation of data, all aspects of the CBA program were explored in full.

Another strength of the evaluation model and final synthesis report was that it took a comprehensive approach to the evaluation of the CBA program. The report itself

meets the needs of several audience types: scholars who wish to research a competency-based model that was tried at a university, university practitioners at other institutions who may want to try a similar program at their own workplace, and internal academic administrators who want to be presented with the results of the program evaluation. Those particular strengths may also be considered limitations of the final synthesis report. Because it is so comprehensive, it may not be looked at by busy administrative leaders within Union State University, who are used to seeing data succinctly summarized. The CIPP model has been recognized as being appropriate for evaluating programs in large-scale, educational systems due to their complexities (Chinta, Kebritchi, & Elias, 2016). The CBA program was smaller in scale, so the final synthesis report may have been over and above what internal university administrators needed. In regards to this limitation, the program evaluator may be asked to shorten the report to include only the program results section when presenting it to academic or other internal departmental leaders at the university.

## Recommendations for Alternative Approaches

The approaches to this research study were driven by its research questions, and a mixed-methods approach was needed to effectively address all of the questions. Additionally, the problem of this study was that that university leaders needed information in order to determine how to improve and expand the CBA program, and a mixed-methods study provided a variety of data for university leaders to consider.

There are, however, alternative approaches that can be considered for the collection of qualitative data. Out of the 11 students who were interviewed, 10 of them

passed the CBA, and more interviews could be done that targeted students who did not pass the CBA to get input from their perspective. This would help leaders better understand why students struggled in the CBA. Additionally, with the proper student consent in place, there could be an attempt made to disaggregate the survey data into two groups, those who passed and those who did not pass, to get a better sense of the perceptions of both sets of students to determine improvements that could better support those who were not successful. Another way to potentially improve the collection methods would be to have a focus group interview with the students – possibly one for graduate students and one for undergraduate students. A focus group format would have allowed the students to hear what other students liked and disliked about the CBA and potentially build on their answers in the context of the other responses. A benefit of the focus group over a one-on-one interview is that participants can stimulate each other to articulate their views and sometimes realize what their own views are (Bogdan & Biklen, 2007). While a focus group could have stimulated deeper responses, there could be a danger that that students who did not pass might have felt a sense of inadequacy if they were in a group with others who did, and they may not participate to the fullest as a result. One way to combat this is to segregate groups between those students who passed and those who didn't, assuming they would agree to participate in such a format. These alternative approaches can be considered for future qualitative data collection efforts.

Additionally, an alternative approach to evaluating the program could have been taken. Frye and Hemmer (2012) provided a review of theories that are common in evaluation models in educational settings. They identified four models that are

commonly used for educational evaluations: experimental/quasi experimental, Kirkpatrick's approach, the logic model, and the CIPP model.

The experimental/quasi experimental model typically looks at a program or program element in order to determine the effect of the program (Mathison, 2005). However, this type of evaluation would not have been appropriate due to the nature of CBA pilot because the intent was not to compare the CBA students with other types of students. Kirkpatrick's four-level evaluation model is another approach, and it is the most popular approach for evaluating training in organizations (Mathison, 2005). The four levels of the model refer to (a) learner's reaction to the program, (b) indicators of learning attributed to the program, (c) changes in learner behavior as a result of the program, and (d) the impact of the training on broader organizational goals (Frye & Hemmer, 2012). Like the experimental model, Kirkpatrick's model would not have been an ideal fit to evaluate the CBA pilot. The CBA pilot evaluation was not solely focused on student learning, but on evaluating student learning along with other data points and stakeholder inputs in order to make a decision.

Finally, the logic model is one that is used in educational evaluations. Logic models typically focus on the desired outcomes of the educational program and then define the logic, in terms of linear paths, to reaching the outcome. While the logic model shares some similarities with the CIPP model, Frye and Hemmer (2012) recognized that there are pitfalls due to its linear nature and the complexities involved in dynamic educational systems. Ultimately, the CIPP model was selected based on its emphasis on decision making and improvement, rather than proving or disproving desired outcomes.

**Scholarship, Project Development and Evaluation, and Leadership and Change**

I have grown as a scholar through the research and development of the project, and I have been able to learn and put into practice research methodologies and program evaluation practices that will continue to serve me in my role with assessment at the university. It has been almost 20 years since I earned my master's degree, and I had to re-learn how do research, what constituted a scholarly peer reviewed source, and how to use APA formatting to cite sources. Searching in an online library, refining searches, and navigating around the various available resources was challenging at first but became easier over time. Likewise, I became better and better at reading and organizing multitudes of research articles, and the second literature review went much more smoothly than the first due to the skills I had gained. I utilized a citation software called Mendeley which housed all of my articles and made it easier to search for them and pull them up whenever I needed to. The practice of finding, retrieving, analyzing and synthesizing a variety of credible sources has led to my growth as a scholar.

I also grew in the area of the application of research methodologies. Because I did a mixed-method study, I became knowledgeable in both quantitative and qualitative methodologies and how to write up and represent both types of findings. I learned about the various kinds of statistical tests that can be performed on qualitative data to determine significance. I also applied all that I have learned about quantitative data collection and analysis through the interview, transcribing, and coding processes. Although using a mixed-method approach added time and effort to the endeavor of the project study, it was

important to be able to answer all of the research questions. Through the application of methodologies learned throughout my coursework, I obtained the knowledge and skills necessary for the practice of doing a research study.

Another area of growth was in content knowledge about important topics in higher education today. Through the literature reviews, I was able to become knowledgeable in the areas of competency-based education, which will serve me well as my university continues to explore competency-based models. Additionally, areas such as self-regulation, motivation in online student populations, and current research in the areas of faculty interaction and peer interaction online can be directly applied to my future leadership in the area of online learning at my university. This knowledge base will continue to serve me well as I strive to become a knowledge leader on the academic team.

Finally, growth occurred as I immersed myself in the theory and practice of program evaluations, which is an entire field of practice in and of itself. I learned of the many different kinds of evaluations and had to determine which type of evaluation would best meet the needs of the CBA pilot program. I learned about JCSEE's program evaluation standards and applied the program evaluations standards throughout the study and the writing of the final synthesis report. This knowledge will serve me well into the future. As my university continues to pilot and evaluate programs, I can help administrative leaders to keep in mind utility, feasibility, propriety, accuracy, and accountability, as well as develop a framework for evaluation and reflection. Like many of the online students at the university where I work, I enrolled as a doctoral student not

only to fulfill a personal achievement goal, but to advance in my profession. The knowledge and skills I have learned have helped me to think more like a researcher, enabled me to critically review leading knowledge in the field, and allowed me to improve my expertise and performance as a practitioner in the field of education.

## Reflection on Importance of the Work

Colleges and universities will continue to be asked to find new and innovative ways to educate students. By 2020, 65% of all jobs will require post-secondary education and employers will continue to seek a skilled and knowledgeable workforce (Carnevale, Smith, & Strohl, 2013). At the same time, traditional educational structures and rigid formats cannot meet the needs of many of today's nontraditional college students. Colleges that can innovate and find alternative ways of meeting the needs of different types of students may be preferred over those with inflexible pathways to degree completion. However, innovation should be done thoughtfully and keep the needs of many different stakeholders in mind.

This study is one example of how a new program can be piloted in a thoughtful manner and with an eye towards the goals that the university is trying to achieve. When those goals are defined, an evaluation of whether the university achieved the results it was seeking comes as a natural next step. In the case of the CBA pilot program, the university wanted to help students with existing competencies, or those that could learn competencies on their own, earn college credit at their own pace and at a decreased cost. The importance of this work relates to how well this study helped university leaders make decisions about the CBA program, and how it can ultimately strengthen the CBA

program into a viable option for a subset of students who can benefit from the competency-based modality. Findings from the study and the final synthesis report have documented what worked and what didn't work as well as the perceptions of students and those supporting them. As more data is gathered, it will be added future evaluations and reports that will contribute to making the program stronger over time.

## Implications, Applications, and Directions for Future Research

This project study on the CBA pilot and the resulting final synthesis report can have implications on several levels. Within the context of the university, the improvements that have been identified can be incorporated into revising the CBA program which can benefit students at the university who choose to enroll in, and are a good fit for, the program. For such students, the CBA format provides an alternative way to earn college credit that could potentially accelerate their degree completion. Furthermore, it is intended for the CBA program to be offered at a third of the cost of a traditional online course, and, if the university keeps its intended price point, degree completion for the students will be more affordable and potentially result in less student debt.

At the institutional level, the program has the ability to keep the university competitive and relevant for growing numbers of nontraditional students. As a public, non-profit provider of online education, Union State University has sought to meet the needs of nontraditional learners from its inception. In order to do this, the university has recognized that it needs to remain flexible, innovative, and provide multiple pathways to earn college credit. Students who choose the online modality value flexibility, choice,

and affordability in their online educational provider (Stansbury, 2016). With the addition of CBA as a competency–based model for earning college credit, the university can possibly attract more students who seek greater flexibility and choice. The program has the potential of serving adult learners who have background experience or prior knowledge in the subject area, which can attract and serve those students as well as benefit university enrollments and sustainability.

Finally, the CBA program, when looked at in the context of competency-based education as a whole, has a potential to impact the field of higher education as well as the larger society. Proponents of competency-based education assert that it has the potential to address several challenges facing higher education: quality, cost, and access (Parsons, Mason, & Soldner, 2016).

Quality is addressed when students are required to demonstrate what they have learned in order to earn college credit, not by the amount of time spend in a classroom. Quality cannot be achieved without the development of reliable and rigorous assessments.

Cost is addressed by the potential to offer competency-based education for less tuition, as is the intention of the CBA program. Because of the continued divestment of public funding for higher education, tuition costs for students and their families have increased (Coleman, 2016). There are universities, such as Southern New Hampshire University and Western Governor's University, which are offering competency-based education at a fraction of the cost of traditional models (Ordonez, 2014). Because of the potential to accelerate completion as students work through coursework at their own

pace, there is an even further opportunity for students to reduce tuition expenses. Innovative approaches such as competency-based models need to occur if higher education is to remain sustainable.

Access is addressed through the asynchronous, online learning environment. To address the challenge of access to higher education, Parsons, Mason, and Soldner (2016) mentioned that competency-based programs provide needed flexibility for students, particularly those who are not considered traditional and may have some college but no degree. Around 31million people have enrolled in college and left without completing a degree (Shapiro et al., 2014). This population of adult learners may wish to enroll in school and complete a degree, and they could benefit from a competency based model that allows them to work at their own pace and accelerate quickly through what they already know (Parsons, Mason, & Soldner, 2016). In sum, the CBA program, along with competency-based models at other institutions, has the potential impact of benefiting the larger society by helping solve the challenges faced by higher education today.

In order to gain acceptance and ultimately influence policy, there should be more research on competency-based models such as the CBA program. As the program becomes more sustainable and enrollments increase, more qualitative and quantitative data can be collected and studied regarding the types of students who are attracted to the program as well as the factors that lead to successful completion. Qualitative data from students who do not pass, withdraw, and complete successfully can be collected over time to contribute to this knowledge. There have been calls for more research on the demographics of students in competency-based educational programs (Kelly &

Columbus, 2016). Additionally, Kelly and Columbus (2016) suggested that researchers look into the success rates of students in competency-based programs, particularly as they compare to students in traditional programs. The American Institutes for Research echoed this need and recognized that leaders of competency-based programs will increasingly be asked to provide evidence of how students in competency-based education programs compare with those in non-competency-based programs (Soldner & Parsons, 2016). As the CBA program grows at Union State University, the university should continue to collect and analyze data on student completion, pass rates, and competency attainment. Not only will such data help the university understand how well the program is performing, but there is a potential to add to the burgeoning and needed research in the area of competency-based education.

## Conclusion

The CBA program was developed by Union State University to address a growing need to provide alternative ways for adult nontraditional learners to earn college credit. As a competency-based program, it allowed students to progress at their own pace; those with prior knowledge and experience could quickly progress through areas they knew, and those without prior knowledge could learn independently on their own. The model is supported in part by adult learning theory which recognizes a need in adult learners to be seen as self-directed and self-regulated, their response to internal and external motivators, and recognizes that adult learners come to the educational setting with a variety of experiences to draw from (Knowles et al., 2015). The CBA model is also supported in part by social learning theory and its focus on the factors involved in self-regulation,

motivation, and self-efficacy (Bandura, 1977). While there was theoretical support that self-regulated and self-motivated adult learners could be successful in the program, university leaders needed to gather information and determine how successful the program was and the extent to which it benefitted the students.

The problem addressed in this study was that university leaders did not have the information they needed to determine how successful the program was and how to improve and expand the program. Therefore, a program evaluation was conducted on the CBA program to answer key research questions about student performance and stakeholder perceptions about the program. The research questions focused on how students in the CBA program compared to students in the traditional online courses on the demonstration of competencies, the pace at which students completed assignments, students' completion and pass rates, and the perceptions of students, faculty, and advisors regarding the program and what to improve. The program was evaluated under the CIPP evaluation model, which emphasizes decision-making and improvement as an overarching goal of a program evaluation. A mixed-method approach to the research was taken in order to answer the research questions of the study. Competency achievement, assignment submission rates, completion rates, and pass rates were answered with quantitative data and analysis, while the question about stakeholder perceptions was explored with qualitative methods.

The findings from the data collection and analysis were collected and provided to administrative leadership at the university in the form of a final synthesis report. The report provided the information needed to inform future decisions about the program as

well as recommendations for improvement based on the data. Some of the thematic findings that arose from the qualitative analysis have been supported by current research in the field of online education. Research on self-regulation, motivation, faculty interaction, and peer interaction reinforced the overall recommendations to target the right kind of students for the CBA program, provide more faculty interaction for those who need it, and provide the opportunity for more student-to-student interaction for those who desire it. The university can increasingly look for ways to support students in becoming self-regulated learners who have flexible options and increasing choice in completing their degrees.

As I think about the findings and the innovations ahead for the university, I feel proud to have contributed their understanding of the CBA program and to have been a part of providing the data and analysis to help them determine improvements to move the program forward. The field of higher education is at a turning point, with less funding available, more scrutiny about the quality of student outcomes, and pressure to meet employer needs. Technology provides colleges and universities with the ability to adapt to the changing landscape and provides more options for both traditional and nontraditional students alike. As the majority of jobs in the U.S. will require the completion of some form of post-secondary education, diversification of options for degree completion will allow colleges to remain relevant and meet the needs of adult learners into the future. This program evaluation of a competency-based model can not only help students at Union State University, but can contribute to the field of higher education as a whole.

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Appendix A: The Final Synthesis Report

## Executive Summary

Union State University has a mission of being the premier provider of innovative, higher learning opportunities for nontraditional students. One way that the university seeks to provide opportunities for nontraditional students is to support undergraduate students through a degree completion model that leverages college credit the student already has and allows them to complete their degrees without having the student retake unnecessary courses. Another way the university supports nontraditional students is to offer credit from alternative sources such as military training or by providing alternative credit pathways that allow students to either earn academic credit by demonstrating prior learning or by testing out of a course. Alternative credit sources provide opportunities for students to earn academic credit at a decreased cost while accelerating degree completion and supporting student learning. These pathways are created in recognition that students come to us with different knowledge, abilities, and life experiences.

Competency-Based Assessment, or CBA, was piloted as a new way for students to earn college credit based on the demonstration of competencies. This model was developed in the spirit of providing a variety of options for students to complete their undergraduate degree or earn a master's degree. The CBA model was piloted in a total of 12 courses, with two unique undergraduate and two unique graduate courses being offered in the CBA format in each of the 2016 Spring A, Fall A, and Fall C terms. Under the CBA model, students participated in a non-instructor facilitated course at their own pace in order to earn credit for the course by demonstrating the course competencies.

Students needed to complete all of the assignments from the parent, traditional online course within the eight-week course timeframe, and they were awarded a grade upon completion of the CBA, which was counted toward their residential credit requirements. This distinction is important because for other forms of alternative credit, the credit is considered non-residential transfer credit, and students are capped at a certain number of alternative credit hours that they can transfer into the institution.

The target audience for the CBA program was self-motivated, independent, undergraduate and graduate students who did not need individualized guidance to complete courses. Should the CBA be implemented on a wider scale, the potential benefits to students include (a) affordability because the cost of a CBA will be significantly discounted from standard course tuition; (b) increased student satisfaction as the CBA provides choice and flexibility to adult, nontraditional students, many who have prior life experiences and can demonstrate learning through alternative modalities; and (c) potential decreased time to program completion because students could demonstrate learning and earn credit in less time than taking a traditional course. The purpose of this final synthesis report is to describe the program antecedents, program implementation, and program results so that improvements can be determined prior to rolling out the program on a wider scale.

## Program Antecedents

Union State University was created in 2007 as an online, independent state university focused on meeting the needs of working adults by offering career-relevant education including bachelor's degree completion and master's degree programs. The

university is not state funded, and tuition from over 16,000 students is its main source of revenue. The university serves mainly nontraditional students, with the average student being 35 years old, married, with children and employed. It offers 13 Bachelor of Science degrees and 11 Master's degrees in a variety of disciplines. 70% of its students are enrolled in undergraduate programs, 40% of students are first generation college students and 23% are from underserved populations. Students represent every U.S. state and territory, and consist of 17% active military, dependent, guard/reserve or veterans. The university is positioned in as a forward-thinking institution that is modern and innovative, with student-focused approaches that foster the efficient and effective completion of degrees.

**Origin of the Program**

In its efforts to meet the needs of nontraditional students, Union State recognizes that students come to the university with a variety of educational and professional skills and experiences. It offers several ways for students to earn alternative credit that can be applied to degree completion requirements. The two main pathways offered to students are through competency based exams, where students can demonstrate course competencies by passing a test and receiving credit, and prior learning assessments, where students can demonstrate proficiency by assembling a portfolio that is evaluated for course competency attainment. All alternative credit options that the university has offered count as non-residential, transfer credit toward undergraduate degree completion. The university provost wanted to expand options for earning college credit for students and brought up the idea for the Competency-Based Assessment as an additional choice

that could benefit certain types of students. Because Union State utilizes the backward design principles for all of its educational learning experiences, every program and course has a defined set of competencies, called learning outcomes that are determined by faculty and provide the goals for student learning. Therefore, all of the online courses at Union State have been designed based on course competencies, and all of the course content and assignments were created so that students are demonstrating the course competencies as they successfully complete each required assignment. Furthermore, once the *master* course is completed, it contains all of the course content, multimedia, and assignments, and it can be easily replicated to create as many course sections that are needed. It is from this master course that a CBA is created, with the only differences in assignments being the weekly discussion question being changed to a short answer assignment because the self-paced CBA has no instructor facilitator.

The university provost recognized that some students already have demonstrated success in courses and are fairly self-sufficient and motivated. Many do not interact on a frequent basis with their instructors and are able to be successful in their coursework due to good academic skills and having professional experience in the subject matter area. The provost believed it would potentially benefit these students to offer them the opportunity to demonstrate the course competencies through the successful completion of all course assignments at their own pace, so they could complete quickly or hand in assignments when their schedule allowed. All that would be needed is to copy the master course and enroll students in such a manner that they could complete the course at their own pace without needing to interact with an instructor or other students.

## Program Implementation

Several areas of the university had to be consulted in order to implement the program. The CBA program was assigned a project manager who was responsible for bringing the appropriate people together, assigning tasks, and documenting decisions. There was no additional funding allocated to the program pilot other than the costs that would be incurred to pay faculty evaluators to assess the student work, budgeted at $156 per student. Approval was granted for five students to be enrolled in each of the 12 CBAs, which brought the estimated cost to roll out the program to $9360.00 (60 students at $156 per student).

The university has four main departmental areas that needed to be considered and consulted with during program implementation.

1. Student enrollment – Although this department was not affected by the CBA pilot since it would not be available to new students, the enrollment department needed to be informed about the pilot in case pilot students reentered the university at a later date. Should the CBA program expand beyond the pilot, the university would need to develop policies for reentry student eligibility.
2. Student operations and advising – The student advising department is responsible for supporting, servicing, and retaining students. Because student advising is the main department that is in contact with existing students, they needed to be fully engaged in the pilot rollout to be a part of student eligibility, enrollment, and support discussions. Student operations include the registrar and student accounting areas, and they were also impacted and involved in the pilot rollout.

3. Academic operations – This department is responsible for instructional quality and delivery as well as the development and maintenance of the university's courses and programs. As such, it was impacted by the pilot in the areas of curriculum development and faculty operations and support.

4. Administrative operations – This department oversees the institution's operations including staff management and finance. Information systems are included in this department, and they were involved in setting up the Student Management System (CampusVue) appropriately.

Departmental leaders in each departmental area were invited to a kickoff call to expose them to the CBA format, surface issues and initial questions, and discuss the specifics of the intended pilot. The kickoff was facilitated by the project manager. The provost of the university attended the kickoff and described the purpose and potential student benefits of the CBA program. His presence also provided credibility and backing for the project. Concerns and issues from each department were captured and the ongoing implementation team was established. After the meeting, the project manager established a task list and ongoing bi-weekly meetings to keep the project on track and work through the list of issues and concerns. As decisions were made, they were captured and eventually published as a *CBA Handbook* that would house all information needed for each department to fulfill its various functions.

## Program Results

### Evaluation Design

The CBA pilot program was evaluated with the CIPP Evaluation Model. The CIPP model was developed in the late 1960s by Daniel Stufflebeam and Egon Guba (Alkin, 2004; Stufflebeam & Shinkfield, 2007). CIPP stands for an evaluation of contexts, inputs, processes, and products. The context evaluation focused on an assessment of the needs, assets, and problems within of the university in order to define the goals of the program. The input evaluation focused on assessing the design and budget of the program in the context of meeting the program's needs and goals. The process evaluation focused on assessing the implementation of the program. Finally, the product evaluation assessed how well the program met its intended outcomes (Stufflebeam, 2004). When doing a summative CIPP evaluation, the four parts of the evaluation answer the following: "Were important needs addressed (context)? Was the effort guided by a defensible design and budget (input)? Was the design executed competently and modified as needed (process)? Did the effort succeed (product)?" (Stufflebeam, 2004, p.246). The CIPP model was chosen as the framework for the evaluation because it is focused on decision-making and improvement. It emphasized setting goals, keeping stakeholders informed with timely information, carrying out work plans, and deciding how to replicate or expand elements of the program (Stufflebeam & Shinkfield, 2007). The following sections contain an evaluation of each of the CIPP components.

**Evaluation Findings**

**Context.** As a degree-completion university, Union State is focused on meeting the needs of nontraditional students who are either completing their undergraduate degree

or pursing a master's degree. The average student is thirty-five years old, married with children, and employed. Many students are pursuing a degree online because of the convenience and flexibility that asynchronous courses offer. The institution is career focused, and most students are completing their degrees in order to advance or change their careers.

With the needs of its learners in mind, the university offers many different pathways for them to earn college credit toward their degree. There are opportunities for students to transfer credit from community colleges and other institutions, and on average, undergraduate students transfer in 59 credits towards the completion of their bachelor degree. These credits can also be transferred in from nontraditional sources of credit such as the military, advanced placement exams and certain corporate and professional training that has been evaluated and deemed to be at the college level. Finally, the university offers its own internal alternative credit options for students such as competency-based exams, where students test out of a course by demonstrating the course competencies via an exam, and prior learning assessment, where students with prior professional experience can demonstrate course competencies by completing a portfolio project that documents their experiential learning. All of the transfer credit opportunities and alternative credit options are available in order to help students to accelerate degree completion while supporting student learning.

Even with its variety of ways to earn credit, leaders at the university wanted to find ways to meet the needs of all types of learners from all types of backgrounds. Adult learning theory tells us that adult learners come into the educational environment with a

variety of life and work experiences and are motivated to learn to fulfill both internal and external goals (Knowles, Holton, & Swanson, 2015). Additionally, feedback from end of course surveys and other institutional surveys has indicated that some students would prefer to work at their own pace, some students find discussion timelines difficult to meet due to work and life schedules, and some students do not find the discussion questions and required responses to other students of value. Leaders at the university are also aware that, due to work and life experiences, some learners have very little need of support from instructors and rarely contact instructors with questions. In other words, some students are more experienced, self-motivated, and independent than others. These types of students are typically successful in the online educational environment.

In order to help these types of students accelerate degree completion and a reduced cost, the university decided to pilot a new course completion option called competency-based assessment, or CBA. The concept of the CBA model was that students complete their online coursework at their own pace, without the direct involvement of an instructor. The role of the instructor was limited to evaluating student work and providing feedback on assignments. Students needed to complete all of the assignments from the parent course (the traditional version of the online course) within the normal eight-week semester timeframe, and they could finish as quickly as they wanted because there was no discussion component to the course (the discussion prompts were changed to short answer assignments). The CBA was meant for self-motivated, independent, undergraduate and graduate students who did not need individualized guidance to complete courses.

University leaders collaborated on the creation of goals for the program based on the defined student needs. The goals of the CBA program were to be able to offer undergraduate and graduate students an option for completing their coursework at a reduced cost in a flexible and self-paced format. In order to determine if the goals were met, the university needed to perform a program evaluation that looked at four key areas:

1. Whether students could complete and pass the CBA without instructor facilitation.

2. Whether students could succeed in a self-paced model by regulating themselves to hand in their major course assignments by the end of the course.

3. Whether students in the pilot program could achieve the course competencies, and how their performance on competencies compared to students in the traditional course.

4. How students and those supporting the students felt about the model.

Therefore, the university performed a program evaluation to look at the four areas in order to determine how to improve the CBA program and determine whether to roll it out on a wider scale. The needs of independent and self-motivated adult learners could be better met once an evaluation occurred that was focused on the four key areas.

**Input.** The program was designed in the context of its goals. As the university looked at expanding options for students to earn college credit, the leadership at the university realized that it already had several good competency-based models to draw from: its traditional courses, its competency-based exams, and its prior learning

assessments (PLA). The university utilized components from all three in order to design the CBA model.

The traditional courses at the university were already designed around course competencies, which the university refers to as learning outcomes. This means that all course lectures, assignments, and other content are aligned with and support the course competencies. The competency-based exam model offered by the university allows students to test out of a course by taking an exam that is aligned with the course competencies, students can test out based on their existing knowledge, but they also have access to the course content and textbook if they need a refresher or need to learn the content on their own. PLAs offer students the opportunity to complete the final portfolio project in a course—which aligns with all of the course competencies—as long as they can provide evidence that they have existing work knowledge or professional experience in the same area of the course.

From these existing options, the idea of the CBA model arose for students to be able to earn credit by completing the traditional course at their own pace without the active facilitation of an instructor. It required that students complete and pass the main course assignments on their own, and by doing so they would be demonstrating the course competencies because the assignments have already been designed to support the course competencies. Like a PLA, students can most likely complete assignments for which they have prior learning rather quickly and progress through some modules or content at a faster pace than they could in the traditional course. Like a competency-

based exam, if students do not have prior knowledge, they can review the course content and textbook and learn the material on their own prior to completing the assignments.

A benefit of the design of the CBA model is that it has minimal budgetary impact. The only initial costs that were incurred are those it took to convert a traditional online course to a CBA. The conversion consisted of changing the weekly discussion prompts into short answer assignments. The curriculum department agreed to absorb the conversion costs for the pilot, which amounted to approximately one hour of work per CBA. Once the budget impact was determined, several other departments were brought in to work through implementation of the process.

**Process.** The original plan for the pilot was to roll out the CBA in four courses over one term. The original four courses that were chosen to be converted to CBAs were chosen based on three criteria: level of program (two courses from undergraduate and two courses from graduate) size of the program (larger programs were preferred in order to have a large pool of potential students to select from) and the placement of the course in the sequence of program (for the first phase of the pilot, an earlier course was preferred). The courses were from the following programs: Bachelor of Science in in Business Management, Bachelor of Science in Healthcare Management, Master of Healthcare Administration and the Master of Science in Organizational Leadership.

There were initial project meetings with the university provost and the project manager where the provost discussed his overall vision in piloting a competency-based model, his rationale behind his vision, and the four courses to convert to the CBA. The kickoff meeting happened three months prior to the CBA launch with the provost and

stakeholders from every department. The project manager arranged and facilitated the kickoff call. At the project kickoff, draft documentation in the form of a handbook was prepared, which covered all of the initial thinking regarding the rationale for the model, the policies and procedures for students, (such as student eligibility, tuition/financial aid eligibility, and academic policies), the policies and procedures for faculty evaluators, and curriculum information about how to convert courses into CBAs. It also covered roles and responsibilities which were agreed to at the kickoff call. Participants were asked to review the draft handbook prior to the meeting and come to the meeting with things that they needed more clarification on or needed to be addressed that were missing. After the handbook was reviewed, the pilot implementation was discussed and ideas for how to evaluate the pilot were surfaced. The project manager established key individuals who needed to be involved and determined a schedule for regular ongoing meetings. A kickoff call was essential so that everyone could get on the same page and hear the same message about the vision, timeline, and roles/responsibilities. Additionally, because the university provost attended the call and shared his vision and how it could benefit students, it lent credibility to the entire project so that the individuals involved knew it was important to him.

After the initial kickoff, meetings were held with the implementation team every two weeks. A list of project tasks created and updated each meeting to keep the project on track. The main issues to work out were decisions in the technological and systems areas regarding how students would be tracked, whether the CBAs would be pass/fail or if students would receive a grade, and how the CBAs would appear on student records. In

the end, the decision was made to place an *A* after the course code and award students grades for the courses. This had minimal impact to students and was easy to set up in CampusVue, the university's student information system. As the decisions regarding the student systems were being decided, the curriculum modifications were also taking place. This entailed changing the traditional online course into a course that fit the CBA format of not having an instructor who was actively facilitating the CBA. Therefore, all discussion questions were changed to short answer assignments that were slightly reworded and aligned with the same learning outcomes as the original discussion prompt. All other course assignments remained intact to maintain the 1000 point structure from the original course. Additionally, the decision was made to hide students from one another in the CBA because they were participating at their own pace and did not need to interact with any other participants to complete their assignments. After the systems were set up and the curriculum was ready, the enrollment team found students to participate in the pilot. The provost decided to allow students to take the CBA free of charge in order to encourage participation and minimize risk to students. Lastly, the project manager found faculty to participate in the pilot based on internal recommendations.

Before the pilot launched the project team discussed how they wanted to evaluate the pilot. The project manager created an evaluation plan that focused on completion and pass rates, the pace of assignment submissions, a comparison of competency achievement, and the perceptions of students, advisors, and faculty members. The group decided that students should be sent a survey at the end of the CBA to capture their likes,

dislikes, and suggestions for improvement. All team members had an opportunity to contribute and provided feedback on the survey questions.

Once the initial four courses were completed, the project manager met with the provost, department leaders, and implementation team to discuss the initial data that was collected based on the evaluation plan on completion rates, pass rates, assignment submission rates, and feedback from students, advisors, and faculty. The provost decided that two additional phases of CBAs should be implemented in order to collect more data. Table 1 provides a calendar showing each phase of the CBA.

Table 1

*Calendar Showing Each CBA Phase*

| Phase | CBA | Dates Students Enrolled |
|---|---|---|
| 1 | MGT300A Principles of Management | 3/7/2016-5/1/2016 |
| 1 | HCM310A Introduction to the U.S. Healthcare System | 3/7/2016-5/1/2016 |
| 1 | HCM502 Organizational Behavior and Human Resources in Healthcare | 3/7/2016-5/1/2016 |
| 1 | ORG530 Business Ethics and Corporate Social Responsibility | 3/7/2016-5/1/2016 |
| 2 | ECN310 Microeconomic Principles | 7/11/2016-9/4/2016 |
| 2 | HCM370 Quality and Risk Management in Healthcare | 7/11/2016-9/4/2016 |
| 2 | HCM520 Managing Performance for Results | 7/11/2016-9/4/2016 |
| 2 | ORG555 Leading Diverse Teams | 7/11/2016-9/4/2016 |
| 3 | ITS315 Introduction to Networks | 9/5/2016-10/30/2016 |
| 3 | ACT410 Government and Nonprofit Accounting | 9/5/2016-10/30/2016 |
| 3 | FIN570 Insurance and Risk Management | 9/5/2016-10/30/2016 |
| 3 | PJM525 Business Analyses | 9/5/2016-10/30/2016 |

Additionally, the provost decided to remove any withdrawals, D or F grades from pilot participants' transcripts so that students who participated in the pilot would not be penalized for enrolling in an experimental program. Prior to implementing the second phase, the implementation team reviewed the issues that arose during the first phase of the pilot and decided on ways to resolve them. For example, one of the issues was that some faculty members in the graduate courses were grading the short answer assignments as if they were a full-length paper and requiring peer-reviewed outside sources. The students gave feedback that the workload was too much and felt like they had two major assignments due every week instead of one. Therefore, the CBAs for the next phase were adjusted and students were instructed to only write two-to-three paragraphs for their short answer assignments. Additionally, the faculty evaluators were provided with training as to how to grade the short answer assignments. Another issue that some students reported was that they wanted to be able to contact the faculty evaluator when they had questions about an assignment or grade. So, for the second and third phases the faculty provided their email addresses and encouraged students to reach out with assignment -related questions.

For the second phase of the CBAs, the provost decided to offer two undergraduate and two graduate courses again and have them be from the same program as the first phase. The advisors had provided a suggestion that students may perform better if they took courses that were later in the program, so courses that fell later in the sequence of the program were offered in the CBA format to see if it made any difference in completion or passing rates. For the third phase of CBSs, the provost wanted to see how

students would perform in more technical and skill based (less theoretical) programs, so he decided to offer CBAs in the following programs: Bachelor of Science in Information Technology, Bachelor of Science in Accounting, Master of Finance, and Master of Project Management. There was another, smaller kickoff meeting before the launch of the second phase, mainly because there were new stakeholders in leadership positions in the curriculum department and a new assistant provost. During the kickoff the lessons learned from the first phase were discussed, the improvements being implemented were provided, and the evaluation plan was reconfirmed. The group agreed that the same student survey should be administered for the second and third phases.

**Product.** After all three phases of the pilot, the evaluation data was looked at to assess whether the program was successful in meeting the university's goals. The goals for the program were to offer the university's nontraditional students options for earning college credit in a flexible manner at their own pace. In sum, a total of 60 students were enrolled in the pilot program. 30 were undergraduate students and 30 were graduate students. The students were enrolled at no charge in order to promote participation and eliminate student risk for participation in an experimental format. A total of 12 courses were offered in the CBA format, and six were undergraduate courses and six were graduate courses. There were five students enrolled in each CBA, with the exceptions of MGT300 with six students and HCM310 with four students. An evaluation plan was created to help university leaders determine whether students benefitted from the program as well as to help leaders make decisions about program improvements. According to the evaluation plan, in order to make a determination about whether

students benefitted, data was to be gathered and evaluated in four areas: student completion and pass rates, student assignment submission pace, how well students achieved the course competencies as compared to students in the traditional online course, and how students and those supporting the students felt about the model. The project manager and program evaluator collected data in these four areas in order to present evaluation findings.

Data for the evaluation was compiled and summarized from several sources. Completion and pass rate data was collected from the university's learning management system when student grades were posted. The project manager tracked the number of students who withdrew from the CBA as well as the final grades for those who did not withdraw. Data regarding the pace at which students submitted assignments was also collected from the learning management system, which provided a timestamp for every assignment that was completed in the course. The learning management system also provided data for student achievement of competencies, which was determined by student performance on the major course assignments that were designed to assess the attainment of the course companies. Lastly, the perceptions of students and those who supported the students (faculty and student advisors) were collected through the student surveys as well as interviews.

***Completion rates and passing rates.*** Student completion and pass rate data showed that overall 83% of students completed the course and 60% of students passed the course. Completion was determined by looking at the number of students who did not withdraw. Passing rates were determined by looking at the number of students who

passed the CBA with a 70% (C) or higher. Table 2 shows the completion rates broken down by course and level.

Table 2

*Completion Rates Indicating Students Who Did Not Withdraw*

| | Withdrew | Completed | Total (n) | % Completed |
|---|---|---|---|---|
| MGT300A | 2 | 4 | 6 | 67% |
| HCM310A | 0 | 4 | 4 | 100% |
| ECN310A | 1 | 4 | 5 | 80% |
| HCM370A | 1 | 4 | 5 | 80% |
| ITS315A | 0 | 5 | 5 | 100% |
| ACT410A | 0 | 5 | 5 | 100% |
| **Undergraduate** | **4** | **26** | **30** | **87%** |
| HCM502A | 2 | 3 | 5 | 60% |
| ORG530A | 0 | 5 | 5 | 100% |
| ORG555A | 2 | 3 | 5 | 60% |
| HCM520A | 1 | 4 | 5 | 80% |
| FIN570A | 1 | 4 | 5 | 80% |
| PJM525A | 0 | 5 | 5 | 100% |
| **Graduate** | **6** | **24** | **30** | **80%** |
| **Total** | **10** | **50** | **60** | **83%** |

Table 3 shows the passing rates broken down by course and level.

Table 3

*Passing Rates Indicating Students Who Passed with a Grade of 70% or Higher*

| | Did Not Pass | Passed | Total (n) | % passed |
|---|---|---|---|---|
| MGT300A | 3 | 3 | 6 | 50% |
| HCM310A | 2 | 2 | 4 | 50% |

| | | | | |
|---|---|---|---|---|
| ECN310A | 2 | 3 | 5 | 60% |
| HCM370A | 3 | 2 | 5 | 40% |
| ITS315A | 2 | 3 | 5 | 60% |
| ACT410A | 0 | 5 | 5 | 100% |
| **Undergraduate** | **12** | **18** | **30** | **60%** |
| HCM502A | 4 | 1 | 5 | 20% |
| ORG530A | 2 | 3 | 5 | 60% |
| ORG555A | 2 | 3 | 5 | 60% |
| HCM520A | 1 | 4 | 5 | 80% |
| FIN570A | 3 | 2 | 5 | 40% |
| PJM525A | 0 | 5 | 5 | 100% |
| **Graduate** | **12** | **18** | **30** | **60%** |
| **Total** | **24** | **36** | **60** | **60%** |

*Note.* Numbers in the *Did Not Pass* column include withdrawals.

The data indicated that undergraduate students completed at a slightly higher rate than graduate students (26 undergraduates completed, and 24 graduates completed). However, both graduate and undergraduate students passed at the same rate, possibly indicating that the CBA model may be no better for one level of student over the other.

***Assignment completion rates.*** The data for the rates at which students completed assignments showed that overall, 32% of students handed in the majority of their assignments over two weeks late. During the pilot, it was recommended to students that they complete one module per week in order not to fall behind (as they would in a traditional online course). Furthermore, university leaders were concerned that in a self-paced course, students would fall behind due to the absence of deadlines. During the course of the pilot, the project manager tracked the rate at which students submitted their assignments. The results are indicated in Table 4.

Table 4

*Pace of Assignment Submissions*

| | N of Students Who Handed in Majority of Assignments Over 2 Weeks Late | Total (n) of Students | Percentage of Students Who Handed in Majority of Assignments Over 2 Weeks Late |
|---|---|---|---|
| MGT300 | 1 | 4 | 25% |
| HCM310 | 2 | 4 | 50% |
| ECN310 | 1 | 4 | 25% |
| HCM370 | 3 | 4 | 75% |
| ITS315 | 2 | 5 | 40% |
| ACT410 | 0 | 5 | 0% |
| **Undergraduate** | **9** | **26** | **35%** |
| HCM502 | 1 | 3 | 33% |
| ORG530 | 3 | 5 | 60% |
| ORG555 | 0 | 3 | 0% |
| HCM520 | 0 | 4 | 0% |
| FIN570 | 3 | 4 | 75% |
| PJM525 | 0 | 5 | 0% |
| **Graduate** | **7** | **24** | **29%** |
| **Total** | **16** | **50** | **32%** |

*Note.* Data in the *Total (n) of students* column does not include students who withdrew.

The data suggests that the graduate students handed in their assignments in a timelier manner than undergraduate students; however, in two graduate courses (ORG530 and FIN570) the majority of students were behind as opposed to only one undergraduate course (HCM370). More data would need to be gathered in order to draw conclusions about how undergraduate and graduate performance differs.

***Competency achievement comparison.*** Data on student competency achievement indicated how well students achieved the course competencies as compared to students in the traditional online course. In order to measure and compare competency achievement

between students in the traditional online course and students in the CBA, the raw scores students achieved on the major assignments were gathered from the assignment rubrics and categorized into four areas: meets expectations (ME), approaches expectations (AE), below expectations (BE) and limited evidence (LE). Any student who handed in at least one assignment was included in the data set, but if student did not hand in any assignments, they were excluded. Findings from the competency achievement data are presented in Table 5 and indicated that students in the traditional online course on average perform better than students in the CBA.

Table 5

*Competency Achievement Data*

| Traditional Online Course | Total (n) | ME | AE | BE | LE |
|---|---|---|---|---|---|
| MGT300 | 39 | 33 | 2 | 0 | 4 |
| HCM310 | 26 | 22 | 3 | 0 | 1 |
| ECN310 | 13 | 11 | 2 | 0 | 0 |
| HCM370 | 21 | 16 | 5 | 0 | 0 |
| ITS315 | 24 | 18 | 1 | 1 | 4 |
| ACT410 | 35 | 32 | 1 | 0 | 2 |
| HCM502 | 25 | 23 | 1 | 0 | 1 |
| ORG530 | 25 | 23 | 2 | 0 | 0 |
| ORG555 | 30 | 27 | 2 | 0 | 1 |
| HCM520 | 27 | 21 | 4 | 1 | 1 |
| FIN570 | 9 | 5 | 1 | 1 | 2 |
| PJM525 | 10 | 10 | 0 | 0 | 0 |
| **Total Traditional Online Course** | **284** | **241** | **24** | **3** | **16** |
| **% Traditional Online Course** | **100%** | **85%** | **8%** | **1%** | **6%** |
| CBA | | | | | |
| MGT300A | 3 | 3 | 0 | 0 | 0 |
| HCM310A | 3 | 2 | 0 | 0 | 1 |
| ECN310A | 3 | 2 | 1 | 0 | 0 |

| | | | | | |
|---|---|---|---|---|---|
| HCM370A | 3 | 2 | 0 | 1 | 0 |
| ITS315A | 5 | 3 | 0 | 0 | 2 |
| ACT410A | 5 | 5 | 0 | 0 | 0 |
| HCM502A | 3 | 1 | 0 | 0 | 2 |
| ORG530A | 5 | 3 | 0 | 0 | 2 |
| ORG555A | 3 | 3 | 0 | 0 | 0 |
| HCM520A | 4 | 4 | 0 | 0 | 0 |
| FIN570A | 3 | 2 | 0 | 0 | 1 |
| PJM525A | 5 | 5 | 0 | 0 | 0 |
| **Total CBA** | **45** | **35** | **1** | **1** | **8** |
| **% CBA** | **100%** | **78%** | **2%** | **2%** | **18%** |

*Note.* Total (n) includes students who handed in at least one assignment and does not include students who did not attempt any assignments.

A total of 85% of traditional students met expectations on competencies, and a total of 78% of students in the CBA met expectations on competencies. There is also a much higher percentage of CBA students in the *limited evidence* category (18%) compared to the traditional course (6%). However, this may be due to the larger number of students who stopped submitting assignments after falling behind in the CBA. Generally, those students who handed in their assignments in the CBAs attained the competency, while those that fell behind didn't attempt the competency at all (as opposed to attempting and doing poorly on the competency). This could indicate that students simply got behind and overwhelmed rather than that they did not have the ability to demonstrate competencies.

***Perceptions of students, faculty, and student advisors***. Data on perceptions was gathered from a student survey that had quantitative and qualitative questions, as well as from interviews with students, faculty and student advisors. 55 students were sent the

CBA survey and 45 of them (82%) responded to the majority of the questions. A summary of the quantitative data appears in Table 6.

Table 6

*Student Survey Response Results*

| **Survey Question** | Strongly Agree | Agree | **% Agree or Strongly Agree** | Disagree | Strongly Disagree | **% Disagree or Strongly Disagree** | Response Count |
|---|---|---|---|---|---|---|---|
| I like the self-paced model of the CBA. | 28 | 11 | **87%** | 5 | 1 | **13%** | 45 |
| I prefer submitting short writing assignments instead of having weekly discussions. | 13 | 18 | **69%** | 5 | 9 | **31%** | 45 |
| I have prior work experience with the same subject matter as the CBA. | 7 | 15 | **49%** | 14 | 9 | **51%** | 45 |
| I have good APA citation skills. | 12 | 29 | **91%** | 3 | 1 | **9%** | 45 |
| I would pay $395 to take another CBA if it were available. | 23 | 13 | **80%** | 6 | 3 | **20%** | 45 |
| I would describe myself as a good student with a B or above average. | 35 | 9 | **98%** | 1 | 0 | **2%** | 45 |
| I found the CBA content to be academically challenging. | 20 | 23 | **96%** | 2 | 0 | **4%** | 45 |
| I accomplished the course learning outcomes. | 22 | 14 | **82%** | 4 | 4 | **18%** | 44 |
| This CBA contains relevant materials to support my learning. | 23 | 18 | **93%** | 3 | 0 | **7%** | 44 |
| The required reading materials in the CBA (e.g., textbook and scholarly articles) are helpful. | 14 | 23 | **84%** | 4 | 3 | **16%** | 44 |
| Overall, I am satisfied with the CBA content. | 20 | 16 | **84%** | 4 | 3 | **16%** | 43 |

Overall, 84% of student respondents agreed or strongly agreed that they were satisfied with the CBA content. 87% indicated that they liked the self-paced format and 69% indicated that they preferred submitting short writing assignments instead of participating in discussions. The responses from the open-ended survey questions support

the quantitative results and provide more detail about why students enrolled, what students liked the most, what they found difficult, and what they would improve. Open ended survey results are summarized in Table 7. If five or more students mentioned the theme, it was included in the table unless there were not a minimum of five responses in any one category.

Table 7

*Themes from Each Student Survey Question*

| Open-Ended Survey Question | Most Frequent Themes (n) | |
|---|---|---|
| Other than it being offered at no cost, what are the reasons you chose to enroll in the CBA instead of taking the traditional, instructor-led course? | 6. Ability to work at own pace/flexibility (20)<br>7. No required discussion posts (8)<br>8. Opportunity to participate in a pilot (7)<br>9. No need for instructor interaction (6)<br>10. Opportunity for self-growth/challenge (6) | |
| Would you enroll in a CBA again in the future if it was available? If so, what are the reasons why? If not what are the reasons? | <u>Yes I Would</u><br>4. Liked the flexibility/ self-paced (18)<br>5. It is similar to other coursework/ similar experience and same results (6)<br>6. Prefers not having discussions (5) | <u>No I Wouldn't</u><br>4. Need to have deadlines/due dates (3)<br>5. Missed having discussions/student interaction (2)<br>6. Had frustrating/ negative faculty evaluator experience (2) |
| What prior experience and personality traits influenced your success, or lack of success, with the CBA format? | <u>Success</u><br>5. Self-driven/ independent (12)<br>6. Goal-oriented/self-motivated (11)<br>7. Previous or current professional experience (7)<br>8. Success in previous coursework (6) | <u>Lack of Success</u><br>5. Bad time management/ procrastination (4)<br>6. Workload on top of other courses (2)<br>7. CBA is more work than a *regular* course (2)<br>8. Interference of outside issues (2) |
| What are the best features of the CBA format? | 4. Flexibility/self-paced (28)<br>5. Not having discussions (10)<br>6. Having autonomy/being self-reliant (5) | |
| What are the things that you found the most difficult while taking the CBA? | 7. Lack of structure/due dates; too easy to procrastinate (12)<br>8. Having no interaction with other students(8)<br>9. Having no interaction with faculty evaluator; having little instructor feedback (8)<br>10. Nothing (6)<br>11. CBA was more work than a traditional course; short answer assignments more time consuming (5)<br>12. Course design/course quality/course textbook quality (5) | |

| | |
|---|---|
| What recommendations would you make to improve the CBA course/learning experience? | 5. Nothing (12)<br>6. Improve course design/assignment requirements/course materials (12)<br>7. Provide more structure and guidance (6)<br>8. Allow student interactions with each other (5) |

*Note*. n = number of students who mentioned the theme.

Survey findings indicate that the aspect the students found the most beneficial and liked the most about the CBA format was the flexibility and that it was self-paced. Another aspect of the CBA format that was mentioned often was that students did not like participating in required discussions and preferred doing the short answer written assignment instead. Another common area mentioned was not having a need for an instructor. Survey responses showed that students attributed their success in the CBA format to certain personality aspects that they possessed such as being self-driven, goal-oriented, and self-motivated. For those students who responded that they did not like the CBA format, the majority said it was because of the self-paced aspect and their tendency to procrastinate. Students were asked on the survey what they would improve about the program. The most common answer was to improve nothing, followed by improvement of the course materials or design, which indicates a similar issue would be in the parent, traditional course also because the CBA uses the same course content and assignments. Improvements to the course materials that students recommended included lessening the number of required and current references in assignments, changing the required textbooks, fixing broken links in course content, providing better clarification on assignment instructions, and ensuring assignments are aligned with the required readings and content for the week. The next most common improvement that students suggested was to provide more structure within the flexible format such as a midterm goal or

deadline. These improvements can be considered by university leaders prior to program expansion.

The student interviews revealed similar findings to the survey data. There were eight students who agreed to be interviewed, four were graduate students and four were undergraduate students. Seven out of eight of them had passed the CBA. The project manager performed the interviews and the interviews took place over the phone. A summary of the interview questions and results appears in Table 8.

Table 8

*Student Interview Responses*

| Interview Question | Summary of Participant Responses |
|---|---|
| What was your impression of the CBA program when you were initially contacted about participating? | • Most said they were excited or intrigued to try the program.<br>• One said she was unsure but because it was being offered free of charge she felt she had nothing to lose. |
| What did you find beneficial? (What did you like?) | • Many said they liked the flexibility of the format and also that they liked not having to post in the discussion forum.<br>• Some also had positive things to say about the faculty feedback. |
| What did you find detrimental? (What did you not like?) | • A few said they couldn't think of anything they didn't like.<br>• A few others brought up the quality of the CBA content.<br>• A couple mentioned not liking things about the faculty evaluator.<br>• Some mentioned that they needed more faculty feedback on their assignments or that it was difficult to meet the faculty evaluator's expectations.<br>• A couple stated that they wanted more student interaction. |
| How would you describe the experience of being in a CBA compared to a traditional course? | • Students mentioned that a CBA really wasn't all that different than the experience being in a traditional course other than it did not have deadlines and did not have required discussion posts.<br>• One mentioned that it was different not having an instructor who was actively engaged in the course, but that it didn't make a difference to her.<br>• Two stated that they missed the interaction with students. |
| What are you aware of now that you were not when you enrolled? | • Most answered that nothing really surprised them, that the program was explained to them well, and that they knew what they were getting into.<br>• One mentioned that he was not clear on the expectations for the short answer assignments going in, but after receiving feedback on his first one, he knew how to do those moving forward. |
| How do you see yourself as a student in terms of ability | • Several mentioned their ability to stay on track, set goals, work ahead, and manage time to stay on schedule. |

| | |
|---|---|
| to self-regulate your behavior in order to meet your goals? | • One student described herself as a procrastinator, and that particular student did not pass the CBA. |
| Describe what motivated you to complete your coursework in the absence of deadlines? | • There were similar responses among participants such as being goal focused, setting their own self-created deadlines and schedule, and having high personal standards and a desire for success.<br>• Two students mentioned having a free course as a motivational factor. |
| Do you feel that your work or educational experiences influenced your performance in the CBA? If so how? | • One student in the technical course said that her lack of professional experience put her at a disadvantage.<br>• Another student who was in the same technical course said that his work experience was one of the reasons he agreed to be in the course because he already knew the content.<br>• Students from other types of courses did not feel that experience was necessary to be successful.<br>• Those with a background in the subject matter said that it made the coursework easier to complete.<br>• With the exception of technical courses, students with or without background said that any students should be able to succeed as long as they had the desire to do so. |
| What do you think should be improved? | • A few students said that they could not think of anything to improve and that they really liked the format.<br>• Two students recommended having an instructor available to reach out to for questions.<br>• Two others mentioned improving the course content, either because it was outdated or because the assignment instructions were not clear.<br>• One student who identified as a procrastinator recommended having a midterm deadline as well as one at the end. |
| Would you do a CBA again? Why or why not? | • All of the student interviewees said that they would participate in the CBA again given the right circumstances.<br>• Cost and flexibility were mentioned as the reasons why they would do it again.<br>• Two students who were in the technical courses qualified their future participation based on whether they had a comfort level with the subject matter<br>• One student said he would only take a CBA again if he were in a situation where he needed a flexible course based on his work and life schedule because he missed the discussion forum and the interaction with other students. |

The project manager also performed interviews with the student advisors. There were two advisors in the second and third phases of the CBA who were responsible for recruiting students to participate in the pilot, explaining the pilot to students, and being the main point of contact when students had questions that were not related to course content or assignments. One of the advisors was an undergraduate student advisor, and

one was a graduate student advisor. The project manager performed the interviews and they took place over the phone. A summary of the interview questions and results appears in Table 9.

Table 9

*Student Advisor Interview Responses*

| Interview Question | Summary of Participant Responses |
|---|---|
| Before the pilot launched, did the pilot seem like a good idea to you? | • One advisor said she did think it was a good idea because she has had students ask her in the past about whether CSU-Global offered any other more flexible options.<br>• The other advisor also thought it was a good idea, and that it made sense to offer it as an option for students. |
| Do you think we recruited students appropriately? | • Both advisors mentioned that they were provided a list of students that were eligible to be enrolled, and it was left to their discretion about who to contact and recruit based on their knowledge of the students.<br>• They both tried to target students who were in good standing and had completed previous coursework successfully.<br>• One advisor mentioned also trying to find students who were not on financial aid because she felt they might be more motivated to participate in a free class. |
| Did you have trouble finding students to enroll in the pilot? | • One advisor said that there appeared to be more interest in some courses more than others.<br>• Both advisors mentioned that some students did not want to try it because they knew they needed the structure or they knew they wanted to take it as a traditional class with other students and more support. |
| Overall, did you feel like it benefitted students? | • Both advisors felt that it did, but only for certain kinds of students.<br>• One said it was only good for students who are self-motivated and organized.<br>• One said that she thought it was a good opportunity, as long as students have experience in the same area as the class. |
| What do you think was detrimental for students or was difficult for them? | • One advisor felt that it is not beneficial for students without prior knowledge or background because they are more likely to not complete the CBA.<br>• One advisor said that some students told her they wanted to have some interaction with other students. She recommended putting up some kind of forum where students could interact with each other. The other advisor felt that some students struggled because they needed a point of contact for assignment and course content questions. She said that students needed more help when they had course-related questions, and that she as an advisor was not able to answer those kinds of questions. |
| What did you find was effective in working with students? | • One advisor said the thing she found effective was establishing a relationship with students. She was constantly checking in with them to see how they were doing.<br>• The other advisor also mentioned that the students were motivated, which led to their success and resulted in less interaction with them on her part because motivated students rarely reach out for help. |

| | |
|---|---|
| Why did you think students were not successful or fell behind? | • Both advisors mentioned that there could be many reasons why students got behind because there are so many life circumstances that can get in the way of completing courses: family emergencies, job promotion, taking on too much.<br>• One advisor said that, because the students didn't have to pay for the CBA, that some may have been less motivated to finish.<br>• One said that if a student happened to be a procrastinator, he or she may have had a tendency to wait too long to hand in work and then probably got overwhelmed. |
| What kind of feedback did you get from students? | • The graduate advisor said that students really liked the CBA and some let her know that they wanted to do it again in the future if another became available.<br>• The undergraduate advisor said that those students who were successful were grateful for the opportunity and really liked it. She also heard feedback that the short answer assignments were more work than the students had anticipated and that some of the assignment instructions were a bit vague. |
| What do you think should be improved prior to the next phase? | • Students should have prior experience.<br>• The university should consider allowing students the ability to interact with each other because some of the students missed having that interaction.<br>• Provide students who are considering enrolling in a CBA with a clear outline of the expectations so that they know what they are getting into.<br>• Make sure the university recruits students appropriately.<br>• Making sure students have completed at least two courses successfully<br>• Provide student support when students have course or content-related questions. |

Lastly, the project manager performed a focus group interview with the faculty members for the CBAs. The CBA faculty members were responsible for evaluating student work, providing feedback on assignments, and answering student questions related to course content or course assignments. There were four faculty members from the second and third phases of the CBA who came to the focus group and provided input. A summary of the focus group interview questions and results appears in Table 10.

Table 10

*Faculty Focus Group Interview Responses*

| Faculty Interview Question | Summary of Responses |
|---|---|
| Overall did you feel that | • One faculty member expressed reservations about whether the students |

| | |
|---|---|
| the CBA format benefitted students? Why or why not? | attained the competencies and was surprised that the CBA was not structured any differently that the traditional course. Even though all of the students in his CBA passed, he stated he would have liked to have had students complete an objective test to ensure students had obtained the course competencies.<br>• Another faculty member said that students benefitted and obtained the competencies.<br>• Another faculty member said he thought the idea was a good one in theory, and he was surprised that his students did not do very well and were not consistent about getting their assignments in.<br>• The last faculty member expressed concerns about course quality and how little time and effort a student could put into the course and still receive an A. He thought the CBA should be more rigorous and that students should be held to higher expectations to receive an A. |
| What do you think are the best features of the CBA format? | • One faculty member stated that it wasn't all that different other than having the short answer questions for the CBA instead of the discussion forum. The same faculty member expressed concerns about having *assignment dumps* at the end of class due to the lack of deadlines and the potential for students to wait until the end of the course to hand everything in.<br>• Another faculty member agreed with the concern that students would hand things in at the end and said there might be a potential for instructor complaints about the CBA format due to that.<br>• A third faculty member felt that it was good for students not to have deadlines because they do not have the added pressure of a due date and can focus on demonstrating competencies |
| Was there anything you felt was detrimental for students? | • One faculty member stated, other than the inability to do group work, that there were not any negatives to offering a course as a CBA.<br>• One said that students miss out on discussions, but felt that discussions were not vital to attaining competencies.<br>• Another faculty member stated that there wasn't anything detrimental because the format of the traditional course is so similar to the CBA. He felt that it was good for students not to be penalized for handing in late work. |
| What are the things that you found the most difficult about being a faculty evaluator in the CBA? | • One faculty member said he wanted to initially reach out to students as he always does in a traditional course, but that he got used to the lack of communication and interaction. He added that he sometimes needs that interaction as an instructor.<br>• Another faculty member said he did not find anything difficult regarding the CBA format specifically, but he did have concerns about the course content and discussion board questions not changing from one term to another.<br>• A third faculty agreed that students circulating the same work can be a problem. He also mentioned that he did not find anything to be particularly difficult or challenging about being a faculty evaluator for a CBA. |
| How well do you feel that students achieved the learning outcomes in the course? | • All faculty members agreed that students demonstrated competencies at the same level.<br>• One said that for students who did their work, it was comparable to what other students did in a traditional course<br>• Another faculty said that he did not see any differences in student |

| | |
|---|---|
| | achievement and said that perhaps on a margin hey did a little better than the students in the regular format. |
| Did you feel that students who enrolled in the CBA had the prerequisite knowledge and skills to be successful? | • One faculty member suggested having criteria to find the students that are the best fit for the program because it is not for everybody.<br>• The faculty discussed the merits of potentially screening the students based on things such as GPA or on whether they consistently handed in assignments early in previous coursework.<br>• Another faculty member said that he didn't think students should be screened, but they should be educated about what they are getting into and what the expectations are.<br>• Another faculty agreed and said the university could also consider a screening for work experience. |
| How would you improve CBA model or process? | • The group discussed the idea having students be able to interact with one another. The faculty were open to student-to-student interaction as long as they did not need to moderate or evaluate it.<br>• One faculty member questioned the possibility of abandoning the semester term structure and instead allowing students to start and finish at their own pace.<br>• Another faculty agreed with that idea and said students should be able to accelerate the rate at which they learn or complete courses as they wish. |
| Would you accept another faculty evaluator assignment for a CBA? Why or why not? | • One faculty member said that he would accept another assignment if the university wanted him to, but he has concerns about the course quality and how little time and effort the students put in and still expect an A.<br>• The other three faculty members said they would definitely accept another CBA assignment, although one faculty member added that the payment to be a faculty evaluator should probably mirror what they get paid for in a traditional course because the workload was similar.<br>• One faculty member said he thought CBAs were good the students not to have looming deadlines.<br>• Another mentioned that the CBA model was a good way for the university to stay marketable and offer students options. |

***Evaluation of impact.*** University stakeholders should look at the evaluation data in its entirety when determining whether the program met the needs of nontraditional students who want to earn college credit in a flexible manner at their own pace. All of the results can help university leaders to make decisions about whether to expand the program and what to improve. Thus, the program evaluation focused on four areas.

The first evaluation area was to look at whether students could complete and pass the CBA without an instructor actively facilitating the course. Overall, 83% of students

did not withdraw from the CBA pilot program, and, of those who stayed enrolled, 60% of them passed. The second area that the evaluation focused on was whether student succeeded in a self-paced model by handing their assignments in a timely manner in by the end of the course. Data from the pace of assignment submissions revealed that only 32% of students who remained enrolled handed in the majority of their assignments over two weeks late. The third area of evaluation was to determine whether students in the pilot CBA program achieved the course competencies and how they compared to students in the traditional course. Of those students who stayed enrolled, 78% of them met expectations on the course competencies; however, 78% is lower than the 85% of students who met expectations on competencies in the traditional courses. The differences in competency achievement may have been due to factors such as students who stopped handing in assignments because they got behind rather than the inability to do the work. The last and final area that was evaluated was how students and those supporting the students felt about the model. Numerical data from the student survey revealed that 84% of student survey respondents agreed or strongly agreed that they were satisfied with the overall CBA content. Open-ended survey responses as well as interviews with students, advisors and faculty provided insights into how the students and those supporting them felt about the program.

From all of the evaluation areas, several conclusions can be determined regarding whether the program met its goals.

- Conclusion 1: A CBA program is good for some students, but not for all of them. There was recognition from students, faculty, and advisors that the self-paced

format only works well with students who are self-motivated and self-driven, with good organizational and time-management skills. Stakeholders described, (or self-described, in the case of students) the qualities that students need to have to do well with this type of model: self-motivated, organized, self-sufficient, goal-focused, timely, and academically successful. Faculty, advisors, and students all felt that the CBA format was good for students who are self-disciplined, but that it could be detrimental for students who were not good with time management.

- Conclusion 2: The main student success factors were self-motivation and past professional experience. Some faculty and an advisor mentioned that having professional experience was an important contributor to student success. More than experience, students attributed their success to being self-driven and goal-oriented more than having previous experience. The students' desires to succeed and achieve goals were mentioned more often in the survey responses and student interviews than professional experience as success factors.
- Conclusion 3: Students differ from faculty and advisors in their perceptions about attaining the course competencies. Although some faculty and an advisor perceived that students may not have learned at the same level with the CBA format, the students did not feel that they were learning less than in a traditional course.
- Conclusion 4: Some students may need more support from the faculty than they received in the CBA. One advisor had concerns about the lack of instructor support because the advisors were unable to answer curriculum and content

questions. Additionally, one faculty member mentioned that lack of involvement with the students was an adjustment. Some students also mentioned that they wanted more instructor support when they had questions.

- Conclusion 5: Some students may wish to interact with other students in the self-paced environment. This feedback was provided in the open-ended survey results as well as the student interviews. It was not true for all students, but some students perceived that they missed interacting with others while in the CBA format. Faculty and student advisors also perceived that students could benefit from the ability to reach out to each other.

In sum, the program was beneficial for the students who successfully completed, as was indicated in survey and interviews. For a subset of self-motivated, high achieving students, the CBA format can be a viable form of education that can provide a way for students to earn college credit based on demonstration of competencies at their own pace.

***Recommended improvements for sustainability.*** Based on the collected data and conclusions, university leaders can consider several types of improvements prior to rolling out the program on a wider scale. Based on the five conclusions above the following improvements should be considered as outlined in Table 11.

Table 11

*Recommendations for Program Improvement*

| Conclusion | Recommended Improvement |
|---|---|
| Conclusion 1: A CBA program is good for some students, but not for all of them. | • Enroll students who are the right fit for the program.<br>• Screen students to determine if they lack time management skills or tend to procrastinate.<br>• Create a self-assessment for students prior to enrollment. |

| | |
|---|---|
| | • Set clear expectations for students who are considering enrollment as to what they are getting into prior to enrolling so they can make an informed decision. |
| Conclusion 2: The main student success factors are self-motivation and past professional experience. | • Screen for student who are independent and self-motivated.<br>• Create a self-assessment that includes questions about prior professional experience.<br>• Require prior professional experience in technical courses. |
| Conclusion 3: Students differ from faculty and advisors in their perceptions about attaining the course competencies. | • Continue to gather student learning data that compares students in the traditional online course to the CBA.<br>• Run statistical analyses on the data and include as part of internal program review processes.<br>• Consider publishing comparison data externally. This type of analysis would be welcome in the field of competency-based education<br>• Consider adding objective tests to CBAs where appropriate as a way for students to demonstrate competency attainment. |
| Conclusion 4: Students may need more support from the faculty than they received in the CBA. | • Provide more instructor support and interaction for students while they are taking the CBA.<br>• Make it clear to students where to go for help.<br>• Ensure that instructors are available to assist with curricular and content questions.<br>• Increase faculty pay to compensate for interaction expectations. |
| Conclusion 5: Some, but not all, students perceived that they missed interacting with others in the CBA format. | • Allow for more peer-to-peer interaction. This would allow students to feel less alone and could potentially result in more engagement.<br>• Provide a forum for introductions and a general chat area for students.<br>• Do not require posting or interaction on the part of the students; participation is optional.<br>• Do not require instructor monitoring of student interactions. |

As university leaders look toward expanding the CBA program, the data suggests these recommendations can result in improvements that students will find beneficial and will sustain the program over time.

After the CBA program is improved, the program should be expanded to include the other degree programs and courses that are offered at the university, including general

education courses. As part of the university's annual review process, each program can review student course evaluation data, pass rates, and completion data as they do with traditional courses on a yearly basis. Additionally, in order to sustain the evaluation over time, the university should formally re-evaluate the program every three to five years to make needed large-scale improvements and to reassess the program's viability and benefits to students. During the formal large scale evaluations, the same data that was gathered for this evaluation can be collected and revisited. Interviews can take place and student learning data can be gathered and analyzed to compare competency achievement between students in the CBA with students in the traditional online course. As the university continues to grow its numbers of nontraditional students, the CBA can be a welcome option for a certain subset of adult learners who are self-sufficient, self-motivated, and have a variety of background knowledge, abilities, and experiences.

## Final Synthesis Report References

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Appendix B: MGT300 Assignment Mapping

**Course Code and Title:** MGT300 Principles of Management
**Credit Hours:** 3

| # | Course Outcome | Mapped Assignment |
|---|---|---|
| 1 | Describe the importance of managerial goals and objectives. | Module 1 Critical Thinking Assignment<br>Module 2 Critical Thinking Assignment<br>Module 8 Portfolio Project |
| 2 | Explain the use of varied leadership styles and techniques for developing a career in management. | Module 1 Critical Thinking Assignment<br>Module 2 Critical Thinking Assignment<br>Module 3 Critical Thinking Assignment<br>Module 8 Portfolio Project |
| 3 | Discuss the importance of management to society, organizations, employees, consumers and the public. | Module 1 Critical Thinking Assignment<br>Module 2 Critical Thinking Assignment<br>Module 3 Critical Thinking Assignment<br>Module 5 Critical Thinking Assignment<br>Module 6 Critical Thinking Assignment<br>Module 8 Portfolio Project |
| 4 | Distinguish the differences between entrepreneurship and established corporate organization behavior, governance and management. | Module 8 Portfolio Project |
| 5 | Describe forecasting and managing future trends, development and change. | Module 8 Portfolio Project |
| 6 | Demonstrate the use of managerial control tools and systems. | Module 5 Critical Thinking Assignment<br>Module 8 Portfolio Project |
| 7 | Recognize management strategy in a globalized world. | Module 1 Critical Thinking Assignment<br>Module 6 Critical Thinking Assignment<br>Module 8 Portfolio Project |

Appendix C: Interview and Focus Group Protocols

## Student Interview Protocol

**Time:**

**Date:**

**Place:**

**Interviewee:**

**Interviewer:**

**OVERVIEW**

- The purpose of this interview is to get feedback from you regarding the CBA course you took. I'll ask you questions about what you felt worked well, what didn't work well, and what we should improve.
- Provide Background. (number of courses, number of students in each course, number of students who completed).
- Your answers will help us understand what we can improve for next time. I
- Your answers are confidential.
- I will be taking notes and also recording this interview in case I miss something.

**QUESTIONS**

1. What was your impression of the CBA program when you were initially contacted about participating?
   *(Probe)*

   *Would you explain that?*
   *What do you mean?*
   *Give me an example. . .*
   *Tell me more about that.*

2. What did you find beneficial? (What did you like?)
   *(Probe)*

3. What did you find detrimental? (What did you not like?)
   *(Probe)*

4. How would you describe the experience of being in a CBA compared to a traditional course?

*(Probe)*

5. What are you aware of now that you were not when you enrolled?
   *(Probe)*

6. How do you see yourself as a student in terms of ability to self-regulate your behavior in order to meet your goals?
   *(Probe)*

7. Describe what motivated you to complete your coursework in the absence of deadlines? What were your obstacles and how did you overcome them?
   *(Probe)*

8. Do you feel that your work or educational experiences influenced your performance in the CBA? If so how?
   *(Probe)*

9. What do you think should be improved?
   *(Probe)*

10. Would you do a CBA again? Why or why not?
    *(Probe)*

**ADDITIONAL QUESTIONS FOR THOSE WHO DID NOT PASS**

1. What would have kept you engaged or on track?
   *(Probe)*

2. What was your reason for not doing the work or falling behind?
   *(Probe)*

3. If you would have paid money, would that have made a difference?
   *(Probe)*

4. If there were firm deadlines would it have made a difference?
   *(Probe)*

**END**

Thank you! You will be providing valuable feedback that we can use to better support students in the future.
Is there any follow up you would like from me?

**Student Advisor Interview Protocol**

**Time:**

**Date:**

**Place:**

**Interviewee:**

**Interviewer:**

**OVERVIEW**

- The purpose of this interview is to get feedback from you regarding what components of the CBA program you felt were beneficial or detrimental to students. I'll ask you questions about what you felt worked well, what didn't work well, and what we should improve.
- Provide Background. CBA was piloted in 4 courses, with 5 students in each course. Provide number of students who completed.
- Your answers will help us understand what we can improve for next time.
- Your answers are confidential.
- I will be taking notes and also recording this interview in case I miss something.

**QUESTIONS**

1. Before the pilot launched, did the pilot seem like a good idea to you?
   *(Probe)*
   *Would you explain that?*
   *What do you mean?*
   *Give me an example. . .*
   *Tell me more about that.*

2. Do you think we recruited students appropriately?
   *(Probe)*

3. Did you have trouble finding students to enroll in the pilot?
   *(Probe)*

4. Overall, did you feel like it benefitted students?
   How?
   In what way?

5. What do you think was detrimental for students or was difficult for them?
   *(Probe)*

6. What did you find was effective in working with students?
   *(Probe)*

7. Why did you think students were not successful or fell behind?
   *(Probe)*

8. What kind of feedback did you get from students?

9. What do you think should be improved prior to the next phase?

**END**

Thank you! You will be providing valuable feedback that we can use to better support students in the future.

Is there any follow up you would like from me?

**Faculty Focus Group Protocol**

**Time:**

**Date:**

**Place:**

**Participants:**

**Facilitator:**

**OVERVIEW**

- The purpose of this focus group is to get feedback from you regarding what components of the CBA program you felt were beneficial or detrimental to students as well as your experience as a faculty evaluator. I'll ask you questions about what you felt worked well, what didn't work well, and what we should improve.
- Provide Background. CBA was piloted in 4 courses, with 5 students in each course. Provide number of students who completed.
- Your answers will help us understand what we can improve for next time.
- Your answers are confidential.
- I will be taking notes and also recording this focus group in case I miss something.

**QUESTIONS**

1. Overall did you feel that the CBA format benefitted students? Why or why not?
   *(Probe)*
   *Would you explain that?*
   *What do you mean?*
   *Give me an example. . .*
   *Tell me more about that.*

2. What do you think are the best features of the CBA format?
   *(Probe)*

3. Was there anything you felt was detrimental for students?
   *(Probe)*

4. What are the things that you found the most difficult about being a faculty evaluator in the CBA?
   *(Probe)*

5. How well do you feel that students achieved the learning outcomes in the course?
   *(Probe)*

6. Did you feel that students who enrolled in the CBA had the prerequisite knowledge and skills to be successful?
   *(Probe)* What improvements could be made to how we screen for potential students?

7. How would you improve CBA model or process?
   *(Probe)*

8. Would you accept another faculty evaluator assignment for a CBA? Why or why not?

**END**

Thank you! You will be providing valuable feedback that we can use to better support students in the future.

Is there any follow up you would like from me?

# Appendix D: CBA Student Survey

As a condition for participation in the Competency-Based Assessment (CBA) pilot course at no cost, you have agreed to participate in a short survey to provide the university with your feedback. Please complete the survey by <*date*>.

Thank you for your feedback

Karen DiGiacomo
Director of Assessment

1. **Please indicate your level of agreement with the following statements**

   **Strongly Agree  Agree  Disagree  Strongly Disagree**

   I like the self-paced model of the CBA.

   I prefer submitting short writing assignments instead of having weekly discussions.

   I have prior work experience with the same subject matter as the CBA.

   I have good APA citation skills.

   I would pay $395 to take another CBA if it were available.

   I would describe myself as a good student with a B or above average.

   I found the CBA content to be academically challenging.

   I accomplished the course learning outcomes.

   The CBA contained relevant materials to support my learning.

   The required reading materials in the CBA (e.g., textbook and scholarly articles) were helpful

   Overall, I was satisfied with the CBA content.

2. **Other than it being offered at no cost, what are the reasons you chose to enroll in the CBA instead of taking the traditional, instructor-led course?**

3. **Would you enroll in a CBA again in the future if it was available? If so, what are the reasons why? If not what are the reasons?**

4. **What prior experience and personality traits influenced your success, or lack of success, with the CBA format?**

5. **What are the best features of the CBA format?**

6. **What are the things that you found the most difficult while taking the CBA?**

7. **What recommendations would you make to improve the CBA course/learning experience?**